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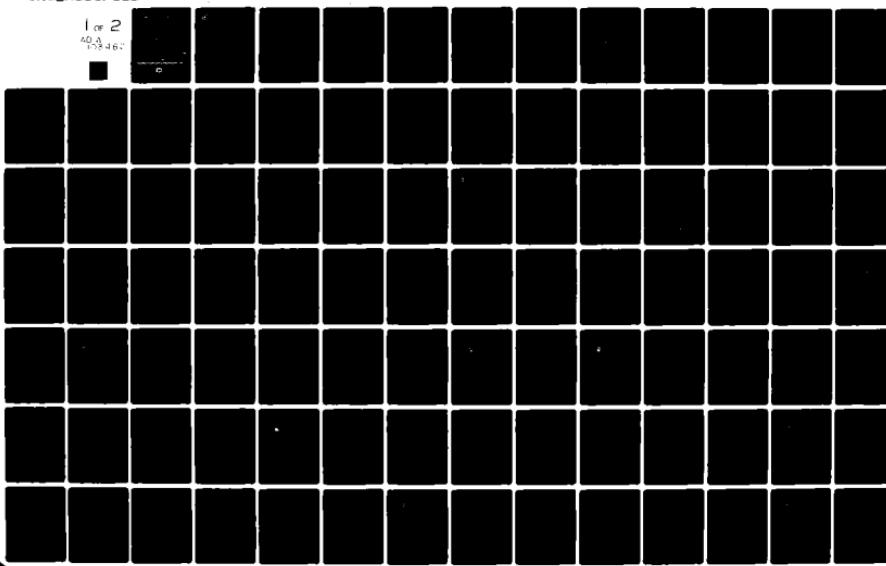
ARMY ENGINEER DISTRICT ROCK ISLAND IL  
IMPLEMENTATION REPORT FOR GREAT II STUDY, UPPER MISSISSIPPI RIV--ETC(U)  
JUN 81

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⑥ **LEVEL**  
**IMPLEMENTATION REPORT**  
**FOR**  
**GREAT II STUDY**

**UPPER MISSISSIPPI RIVER**

**(GUTTENBERG, IOWA TO  
SAVERTON, MISSOURI)**

**FINAL REPORT**

⑦ Final rpt.

⑧ DTIC  
ELECTED  
AUG 31 1981  
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⑨ JUN 1981



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**US Army Corps  
of Engineers**  
Rock Island District

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DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61201

REPLY TO  
ATTENTION OF:

NCRED-PB

31 JUL 1981

GREAT II Team Members; Chairman, Upper Mississippi River Basin Commission; and Interested Parties

Inclosed is a copy of the Final Implementation Report for the GREAT II Study for your information. This report outlines programs and provides a vehicle for following up on GREAT II recommendations addressed to the Corps of Engineers, in particular the Rock Island District.

The Implementation Report contains information about costs, authorities, and the District's priority rankings for carrying out recommendations for the future management of water and related land resources of the Upper Mississippi River from Guttenberg, Iowa to Saverton, Missouri. Appropriate review comments on the Draft Implementation Report, which was distributed in February 1981, have been incorporated to help strengthen this Final Implementation Report.

The GREAT II Main Report, which was approved by consensus of the GREAT II Team in January 1981, forms the basis for this Implementation Report. In order to provide for implementation of all recommendations contained in the GREAT II Main Report, programs and funding will be required from all States and Federal agencies identified for carrying out GREAT II recommendations.

Due to the closeness of report finalization dates for the GREAT I and GREAT II Implementation Reports, the North Central Division Engineer's Notice of the Final Report covers both GREAT I and GREAT II. This Public Notice is contained in the Implementation Report as an inclosure to the Division Engineer's 1st Indorsement and follows page 29.

Sincerely,

BERNARD P. SLOFER  
Colonel, Corps of Engineers  
Commander and District Engineer

Incl  
Final GREAT II Implementation  
Report with Public Notice

IMPLEMENTATION REPORT FOR GREAT II STUDY  
UPPER MISSISSIPPI RIVER

US ARMY ENGINEER DISTRICT, ROCK ISLAND  
CORPS OF ENGINEERS  
CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61201

JUNE 1981

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# IMPLEMENTATION REPORT FOR GREAT II STUDY UPPER MISSISSIPPI RIVER

JUNE 1981

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IMPLEMENTATION REPORT FOR GREAT II STUDY  
UPPER MISSISSIPPI RIVER

JUNE 1981

## SECTION 1 - INTRODUCTION

### RELATIONSHIP TO GREAT II REPORT

The GREAT II report is an interagency, state and public cooperation report which contains recommended policies and actions for the future management of water and related land resources of the Upper Mississippi River from Guttenberg, Iowa, to Saverton, Missouri. The GREAT II report forms the basis for this "Implementation Report for the GREAT II Study." This report provides programs by which the Corps of Engineers, in particular, the Rock Island District (RID), can carry out recommended actions in those areas where the Corps of Engineers has the authority and/or responsibility to manage the river resources. The data and documents of the GREAT II report are used as the basis for the recommendations found herein and are considered as attachments to this report.

### STUDY AUTHORITY

The authority for the GREAT II report and this implementation report on the GREAT II study is contained in Section 117 of the Water Resources Development Act of 1976 (Public Law 94-587). Section 117 of this legislation reads:

The Secretary of the Army, acting through the Chief of Engineers, is authorized to investigate and study, in cooperation with interested States and Federal agencies, through the Upper Mississippi River Basin Commission the development of a river system management plan in the format of the "Great River Study" for the Mississippi River from the mouth of the Ohio River to the head of navigation at Minneapolis, incorporating total river resource requirements including, but not limited to, navigation, the effects of increased barge traffic, fish and wildlife, recreation, watershed management, and water quality at an estimated cost of \$9,100,000.

## SECTION 2 - RECOMMENDATIONS OF GREAT II TO BE IMPLEMENTED BY THE CORPS OF ENGINEERS

### GENERAL

The GREAT II report presents many recommendations to be implemented by the Corps of Engineers for future improvements in the management of the Upper Mississippi River within the jurisdictional boundaries of the Rock Island District. The recommendations cover the following nine areas of river management: (1) Channel Maintenance; (2) Commercial Transportation; (3) Commercial, Industrial, and Utility Development; (4) Flood Plain Management; (5) Recreation; (6) Water Quality; (7) Sediment and Erosion Control; (8) Fish and Wildlife Management; and (9) Cultural and Aesthetic. Table 1 summarizes the GREAT II recommendations to be implemented by the Corps of Engineers and provides an implementation program for each recommended action. The table further cites the authority under which the recommended action can be implemented; provides a RID implementation cost for each action and gives the appropriation to be used; categorizes the recommendation as an Action, Funding, or Further Study item; and prioritizes the recommended action into a High, Medium, or Low implementation category.

### IMPLEMENTATION PRIORITIES

Of the 56 major recommendations in the GREAT II Main Report, the Corps of Engineers has been identified as the lead agency responsible for implementing 32 of these recommendations either totally or in part. Within these 32 major recommendations, there are 76 recommended actions for implementation; 72 by the Rock Island District. The RID has prioritized the 76 actions into High, Medium, and Low categories with 39 items as High priority, 17 as Medium priority, 16 as Low priority, and 4 actions that will not be addressed or further addressed by the RID. The Rock Island District has established the High priority items for plan implementation within 5 years or by 1986.

GREAT II Recommendations 39, 52, 53, and 54 all address the need for ongoing coordination. Implementation of these recommendations are essential to the implementation of most of the remaining GREAT II recommendations and are, therefore, considered to be the first recommendations to be implemented within the High priority category. GREAT II Recommendation 8 addresses the plans contained in the Channel Maintenance (CM) Handbook. The Channel Maintenance Plan received the largest, single amount of study by the GREAT II Team. The plans and studies of the CM Handbook will be pursued as the next High priority item.

## SECTION 3 - IMPLEMENTATION RECOMMENDATIONS

### GENERAL

The GREAT II recommendations represent a substantial step forward in river resource management on the Upper Mississippi River. Many of the High prioritized recommended actions are now being implemented or can be implemented in the near future as part of ongoing programs. As recommended pilot and demonstration programs are performed, the necessary environmental assessments will be prepared before these methods become part of the overall management plan.

### RECOMMENDATIONS REQUIRING ACTION BY THE CHIEF OF ENGINEERS

Implementation of the High priority program will require increases in funding, predominantly in the annual operation and maintenance (O&M) budget of the Rock Island District. This funding, as well as an increase in general investigation (GI) funding to conduct advance planning of the Upper Mississippi River navigation system, will be requested on an annual basis as part of the normal budgeting cycle. Justifications for the annual budget request will continue to be furnished with each request; however, some of the actions can be justified on the contents of this implementation report and the GREAT II report.

### RECOMMENDATIONS REQUIRING ACTION BY CONGRESS

Actions required by the Congress to allow implementation by the Corps of Engineers of GREAT II recommendations consist of both appropriations and authorization actions.

#### APPROPRIATIONS

Increases in the level of appropriations to operate and maintain the 9-foot navigation channel project would be required for implementation of the High priority program. These increases would be predominantly for implementation of the Channel Maintenance Plan. Funds for fish and wildlife and recreation may be best allocated specifically for those activities to insure that those funds are not transferred to dredging if the dredging needs are greater than anticipated.

#### AUTHORIZATION

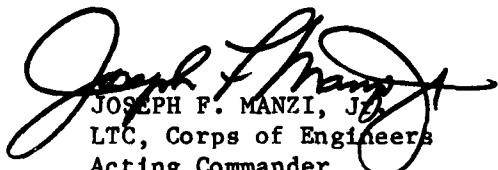
Two GREAT II recommendations require congressional authorization. The recommendations are that Congress should (1) provide the Corps of Engineers

with increased funding and authority associated with the Upper Mississippi River 9-foot navigation project to give equal consideration and to complete measures to benefit fish and wildlife and recreation resources, and (2) amend Public Law 89-72 to allow the Rock Island District, with the approval of affected agencies, to develop and maintain recreation areas on Corps general plan lands on the Upper Mississippi River without local cost sharing. All measures carried out under the authority in (1) above must be coordinated fully with and agreed to by all agencies having State and Federal fish and wildlife resource management responsibilities in the affected area.

The Rock Island District endorses these GREAT II recommended actions for congressional authorization.

#### **SECTION 4 - DISTRICT ENGINEER'S RECOMMENDATION**

I recommend that the High prioritized programs be approved and funded for implementation on an orderly basis to provide full implementation of these programs by 1986.



JOSEPH F. MANZI, Jr.  
LTC, Corps of Engineers  
Acting Commander

TABLE 1  
CORPS OF ENGINEERS GREAT LII IMPLEMENTATION PROGRAM

MAIN REPORT NO.	RECOMMENDATION	PROGRAM	IMPLEMENTATION PRIORITY	ITEM	RID IMPLEMENTATION COST	AUTHORITY
1	The Rock Island District (RID) should develop a program to conduct advance planning of the Upper Mississippi River (UMR) navigation system so that locks whose capacity will be exceeded can be identified and studied in accordance with existing legislation. The advance planning program should include (1) a study to determine the effects of barge traffic (and increased traffic) on the environment, and (2) coordination with and utilization of the results of the Upper Mississippi River Basin Commission (UMRBC) Master Plan Study to determine the carrying capacity of the UMR. If the Master Plan does not complete this study, the RID should include this study as part of their advance planning program.	The RID considers this a high priority item since major modification to Lock 22 will be required in the near future and is a suggestion of the National Waterways Study. Therefore, the RID will pursue funding in the next budget cycle (FY 83) for this program. Studies would be accomplished over a 5-year period to include one year for collecting base data, three years for checking and determining impacts, and one year for study completion and formulation. A study to determine the carrying capacity of the UMR will be included if not completed as part of the Master Plan.	High	Action	Cost for this program will be somewhat dependent upon the results of the UMRBC Master Plan. Based on the best information at this time, the total cost is estimated at \$3,000,000. (General Investigation - GI)	Rivers & Harbors (R & H) Acts of 3 July 1930 and 30 August 1935. Specific to d and f: US Senate Committee on Public Works resolution, 5 March 1969. Specific to e: Public Law 89-72. Also affecting d and f is Office of the Chief of Engineers (OCE) letter of 19 March 1969, subject Mississipi River Navigation System Adequate Mooring Facilities for Watercraft.
	While this program is being developed, the RID should develop a plan to institute the following non-structural and structural measures:	<p>a. Improvement of efficiency by providing average lock processing times for each lock to the barge and towing industry.</p> <p>b. Improvement of safety by installing locking information signs at each lock.</p>	2	<p>a. The RID has tentative plans to post locking times for individual tow crews with the best times posted by boat name and the others blind. This would probably be done by a semi-annual letter to towing companies. An opinion survey of company officials will be conducted prior to implementation.</p> <p>b. The RID does not plan to post locking information signs because radio announcements of locking through times are considered more effective and</p>	<p>a. \$1,000 (Operations and Maintenance - O&amp;M)</p> <p>b. N/A</p>	<p>Action</p> <p>N/A</p>

MAIN REPORT NO.	RECOMMENDED ACTION	RECOMMENDED ACTION NO.	PROGRAM	IMPLEMENTATION PRIORITY	ITEM	IMPLEMENTATION COST	AUTHORITY
1 (Cont'd)							
	because the RID does not feel the conflicts between commercial navigation and recreational boaters are exceptional. The RID would be willing to conduct a survey at one lock if this action was initiated through the Ongoing River Resource Management Team (ORRMT). <u>a/</u>		c.	High	Action (in progress)	c. N/A	
c. Improvement of lock congestion by implementing sequence locking procedures at Lock 22.	4	c.	The RID has already established a two up and two down locking procedure at Lock 22 for congested periods.	Medium	Action (SLD)	d. N/A	
d. Establishment of lock waiting areas at each lock and dam.	5	d.	Lock waiting areas will be considered in the General Investigation study on the adequacy of watercraft mooring facilities that has been initiated by the Corps' St. Louis District (SLD).	Medium	Action (SLD)	d. N/A	
e. Establishment of boat launching facilities.	6	e.	Under Public Law 89-72, the RID cannot build new boat launching areas without a local sponsor. Therefore, state and local agencies need to make themselves available as sponsors or request a change in legislation to allow the RID to assume full construction and maintenance costs.	Low	Action	e. \$250,000 (OBM)	
f. Construction of a mooring cell just north of Lock 22.	7	f.	The need for this mooring cell will be included in the studies to be accomplished in the program for Recommended Action No. 1.	Medium	Action	f. \$750,000 for construction (OBM)	

2/ ORRRT name changed to River Resources Coordinating Team (RRCT) at initial meeting held on 18 May 1981.

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDED ACTION NO.	PROGRAM		IMPLEMENTATION PRIORITY	ITEM	RIO IMPLEMENTATION COST	AUTHORITY
			IMPLEMENTATION	IMPLEMENTATION				
2	The North Central Division (NCD) should update their navigation charts of the UMR and reorganize the pages in consecutive order. The new charts should include data on boating hazards, access sites, service areas, navigation aids, bridge clearances, highline crossing clearances, safety tips, laws on "rules of the road" and emergency service information.	9	In a 2 Dec 80 letter to the NCD, the RIO recommended that the NCD make the UMR navigation charts similar in format to those of the Illinois Waterway and recompile or photo-revise obsolete sheets. In the letter, it was recommended that contracting this work be considered.	Medium	Action (NCD)	N/A	R & H Acts of 3 July 1930 and 30 August 1935.	R & H Acts of 3 July 1930 and 30 August 1935.
4	The US Coast Guard (USCG/DOI) should, in cooperation with the RIO/COE, undertake an inventory of commercial and recreation navigation hazards in segments of the GREAT II study area with a history of frequent accidents and devise an action plan for eliminating these hazards or protecting water traffic from them.	10	The RIO would cooperate with the USCG in the inventory of navigation hazards and the development of an action plan for eliminating these hazards or protecting water traffic from them.	Low	Action	\$10,000 (0MM)	R & H Acts of 3 July 1930 and 30 August 1935.	R & H Acts of 3 July 1930 and 30 August 1935.
6	State and Federal agencies concerned with permitting of fleeting and river development should streamline, where applicable, their permitting procedures by:	11	The procedures outlined in subparagraphs a, d, and e are already in effect for RIO/COE permits.	High	Action (in progress)	N/A	Primarily Section 404 of the Clean Water (CW) Act of 1977.	Primarily Section 404 of the Clean Water (CW) Act of 1977.
	a. Establishing time limits in which comments may be received or project reviews conducted.						Also Section 10, R & H Act of 3 March 1899, Endangered Species (ES) Act of 1973 and Preservation of Historic & Archaeological Data Act of 1974.	Also Section 10, R & H Act of 3 March 1899, Endangered Species (ES) Act of 1973 and Preservation of Historic & Archaeological Data Act of 1974.
	b. Coordinating responses between various agencies or departments within a state.		The procedure outlined is a state action.	N/A	N/A			
	c. Establishing more precise evaluation guidelines for environmental analysis so that project assessments can be accomplished at a reasonable cost and in a timely fashion.	12	The RIO is willing to cooperate with the states in establishing more precise guidelines for environmental analysis.	Low	Action	\$5,000 (0MM)		

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDED ACTION NO.	PROGRAM	IMPLEMENTATION PRIORITY		IMPLEMENTATION COST	AUTHORITY
				ITEM	IMPLEMENTATION PRIORITY		
6 (Cont'd)	d. Requiring some degree of documentation supporting objections or concerns expressed by agencies or individuals.	13		High	Action (in progress)	N/A	
	e. Investigating issuance of general permits for minor and similar activities.	14		High	Action (in progress)	N/A	
7	The RID should undertake studies, in coordination with the state and Federal resource agencies, to assess the impacts of barge fleeting on the IWR.	15	The RID will coordinate and cooperate with the states considering the status of fleeting areas within their boundaries.	Medium	Action	\$2,000 per year (0.6M)	Sections 10 and 15, R & H Act of 3 March 1899.
8	The RID should dispose of dredged material in accordance with the objectives and procedures of the Channel Maintenance Handbook and in cooperation with the On Site Inspection Team (OSIT). Site selection decisions should be made independently of any compensation which might be offered or withheld by any governmental body, business concern, or private individual. Sites to be used in the disposal of dredged material in the RID have been identified as primary sites or alternative sites and are shown in the Channel Maintenance Handbook. One of the long-range goals of the Channel Maintenance Plan is to utilize the primary sites.	16	The RID will use the primary disposal sites which are within the existing expanded equipment capability and will request funding and equipment necessary to allow disposal in additional primary sites that have been shown to be feasible and practicable by GREAT II recommended demonstration projects.	High	Action	\$700,000 per year (0.6M)	General authority for all actions under Recommendation 8 are the following R & H Acts: 18 June 1878 2 March 1907 3 March 1908 22 September 1922 21 January 1927 3 July 1930 30 August 1935
	In the use of these disposal sites, the RID should:						These R & H Acts are constrained by the legislations listed below.
	a. Prepare a preliminary disposal site plan in coordination with the OSIT, for each of the primary sites within 5 years.	17	In FY 81, the RID will prepare, in coordination with the OSIT, a prototype preliminary disposal site plan for review by the ORRAT. The prototype preliminary disposal site plan will include mitigation requirements developed by the Fish & Wildlife Interagency Committee (FWIC).	High	Action	\$2,000 (0.6M)	Section 404(t), CW Act of 1977.

MAIN REPORT NO._	RECOMMENDATION	RECOMMENDED ACTION NO._	PROGRAM	IMPLEMENTATION PRIORITY		IMPLEMENTATION COST	AUTHORITY
				ITEM	RID IMPLEMENTATION COST		
8 (Cont'd)	b. Conduct reconnaissance surveys for cultural resources.	18	The RID will complete all actions specified in subparagraphs b through j when using disposal sites.	High	Action	\$3,000 per year (0\$M)	Section 404(t), CWA Act of 1977.
	c. Obtain all necessary permits prior to disposal.	19		High	Action	No additional cost	
	d. Obtain approval from the Heritage Conservation and Recreation Service (HCRS) prior to disposal on areas funded for recreation by the Land and Water Conservation Fund (LAWCF).	20		High	Action	No additional cost	
	e. Utilize water quality assessment techniques developed by GREAT II to predict and verify impacts of dredging.	21		High	Action	\$5,000 per year (0\$M)	National Environmental Policy Act of 1969 (NEPA 69).
	f. Place material found to be polluted in confined upland disposal sites or apply treatment to neutralize.	22		High	Action	\$25,000 per year (0\$M)	NEPA 69
	g. Conduct advance site preparation following site-specific parameters to be determined by the OSIT.	23		High	Action	\$30,000 per year (0\$M)	NEPA 69
	h. Minimize water quality impacts of return flows.	24		High	Action	\$ 5,000 per year (0\$M)	NEPA 69
	i. Monitor all sites to document the impacts on fish and wildlife resources (including photographic record).	25		Medium	Action	\$ 5,000 per year (0\$M)	NEPA 69
	j. Acquire disposal sites/rights at the earliest possible date.	26		High	Action	\$30,000 per year (0\$M)	NEPA 69

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDATION NO.	IMPLEMENTATION PRIORITY	R (1) IMPLEMENTATION COST	
				PROGRAM	ITEM
8 (Cont'd)	k. Mitigate all losses due to disposal of dredged material 2 <sup>nd</sup> test and monitor the mitigation measures.	27	The RID will include mitigation in the development of site plans and will test and monitor the mitigation measures. Revegetation of dredged material experiments will be incorporated into the mitigation program.	High	Action \$100,000 per year (NAM)
Each participating GREAT II Federal agency and state should designate one primary representative as a voting member to the OSIT for providing input and guidance to the RID when making dredging and dredged material placement decisions.	28	The RID, through their Operations Division, will actively participate on the OSIT as a voting member and will provide technical data on dredging and dredged material placement activities.	High	Action \$7,500 per man-year (NAM)	
The RID should proceed with an emergency dredging when required to free a grounded vessel or to remove shoals in the channel as a result of a vessel freeing itself or when the channel is impassable. The emergency should continue only until an adequate channel depth and width, as determined by the RID, is restored to allow vessel passage. Within 30 days following the emergency dredging, the RID will provide the following information to appropriate regulatory agencies: (1) nature of occurrence that necessitated the emergency or imminent closure of dredging; (2) sounding data; (3) dredging depths; (4) volume of dredged material; (5) type(s) of dredging equipment used; (6) methods of dredged material placement; (7) available data concerning the chemical and physical composition of the sediment; (8) duration of dredging operation, including beginning and ending dates; (9) project alternatives considered including alternative dredging methods and placement sites; (10) discussion of mitigative measures that were considered and used; (11) discussion of any biological effects; and (12) written projections of water surface and depth.	29	The RID supports the recommended wording and is currently providing the required information in agreement with Section 404(t), CW Act of 1977.	High Action (in progress)	N/A	

Last sentence of Section 404(t) of CW Act of 1977 gives the Secretary of Army authority to waive state dredged material discharge requirements. CNE, by 2nd indorsement to NCSCD letter of 1 August 1978, Subject: Dredging Under Emergency Conditions, has elected to use the definition:  
"An emergency is a situation in which there is a grounding in the channel, which might, if not corrected, cause loss of life or serious property damage." and will not delegate the decision as to when the above circumstance exists. Thus, Section 404(t) is waived only in an "emergency" as determined by the Chief of Engineers.

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDED ACTION NO.	PROGRAM	RID		IMPLEMENTATION COST	IMPLEMENTATION	AUTHORITY
				IMPLEMENTATION PRIORITY	ITEM			
8 (Cont'd)	The RID should conduct an environmental and economic analysis for implementation of the GREAT II Channel equipment needs and request the necessary appropriations from Congress to obtain the capability so that all the objectives as presented in the GREAT II Channel Maintenance Handbook can be accomplished within five years of the CHP approval by the GREAT II Team. Until this capability is available, the RID should utilize contract dredging when necessary to meet these objectives.	30	Using the results of the equipment and disposal demonstration projects, the RID will request appropriations the best environmental and economic balance as determined by the ORNT. The RID will continue to cooperate with the St. Paul District in their attempt to obtain contract dredging.	High	Action	Cost Recommended Action No. 16.	Cost Covered in Recommended Action No. 16.	NEPA 69
	The RID should agree to a long-term commitment to the beneficial use of dredged material.	31	Within equipment capabilities, the RID has attempted to make beneficial use of dredged material. The District will continue these efforts as equipment and funding limitations allow. Beneficial use will be achieved where it is cost effective or justified due to environmental considerations.	High	Action (in progress)	N/A	Action (in progress)	N/A
	The RID should conduct a demonstration dredging project during 1981 or 1982 to determine the feasibility and cost effectiveness of accomplishing channel maintenance by:	32	The RID will evaluate the St. Paul District mechanical equipment contracting demonstration in order to determine the applicability of the recommended dredging methods for RID.	High	Action (in progress)	\$ 8,000 (OSM)	Action (in progress)	
	a. Mechanical dredging with a backhoe directly loading onto barges.							
	b. Hydraulic dredging with direct loading onto barges.							
	c. Mechanical unloading at material placement sites.							
	d. Hydraulic unloading at material placement sites.							

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDED ACTION NO.	PROGRAM	IMPLEMENTATION		AUTHORITY
				PRIORITY	ITEM	
8 (cont'd)	The RID should trace dredged material to evaluate the environmental and hydraulic impacts of riverine disposal and subsequent movement of dredged material in the flood plain.	33	The RID will perform a dredged material disposal tracing experiment in FY 81.	High	Action	\$200,000 (0.8M)
	The RID should evaluate the environmental and economic impacts of dredged material behind levees.	34	In FY 81, the RID will prepare and perform, in coordination with the affected Levee District, a behind the levee demonstration project at Keihsburg, Illinois (or another site if no dredging is required at Keihsburg).	High	Action	\$ 25,000 (0.8M)
	The RID should investigate within five years the environmental and economic impacts of double pumping of dredged material.	35	The RID will investigate the environmental and economic impacts of double pumping of dredged material in their dredged material disposal tracing experiment.	High	Action	\$ 30,000 (0.8M)
	The RID should agree to alternative methods of dredging and disposal in sensitive areas.	36	Where environmental investigations by the RID, or other agencies, show that habitat necessary for the survival of endangered or threatened species and fragile wetlands, backwaters, and lowland habitats would be degraded by dredging or disposal, a plan for minimizing impacts will be prepared by the RID, and will be coordinated with the ORRNT.	High	Action	\$ 2,500 per year (0.8M)
	The RID should insure access to equipment necessary to dispose of dredged material in the primary sites designated in the Dredged Material Disposal Plan.	37	Using the results of the equipment and disposal demonstration projects, the RID will request appropriations to implement the plans which provide the best environmental and economic balance as determined by the ORRNT.	High	Action	Cost covered in Recommended Action No. 16.
	In 1979 the RID organized a committee entitled "Committee for the Assessment of Regulatory Structures" (CARS) to evaluate the status of regulatory structures in the GREAT II area. In order to reduce both short- and long-term dredging requirements through evaluation of river hydraulics, the RID should institute CARS permanently. The specific duties of CARS should include the following:					

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDED ACTION NO.	PROGRAM	IMPLEMENTATION PRIORITY		ITEM	RID IMPLEMENTATION COST	AUTHORITY
				IMPLEMENTATION PRIORITY	ITEM			
8 (Cont'd)	a. Reduce the quantities of dredged material for each dredging occurrence in the short-term by continuing to perform detailed hydrographic surveys of each prospective dredge site to find the location, depth, and width of the best channel for that stretch of the river. Recommendations should be submitted to the US Coast Guard as to where the channel might stabilize so that navigation buoys can be realigned.	38	The RID will provide timely information on channel maintenance to the OSIT. The RID will also continue to recommend replacement of navigation buoys to the US Coast Guard.	High	Action	No additional cost (0MM)	No additional cost (0MM)	
	b. Reduce the quantities of material dredged in the long-term by refining the existing two-dimensional sediment transport model to assess the regulatory structures effectiveness and further needs near chronic dredge areas. The model can then be used to determine the optimum channel size that will meet navigation requirements for a given stretch of the river knowing the flow and depth conditions that exist there.	39	Within available funding, the RID will continue to supply data to institutions constructing and refining sediment transport models. The RID will use these models in their analysis of chronic dredging areas.	Medium	Action	\$100,000/mile (0MM)		
	c. Use of the results of the GREAT II Wing Dam Classification Study and the Wing Dam Matching Study to ascertain the relationships between biological and physical parameters of various types of wing dams. CARS, in coordination with the GREAT II proposed FMC, should include this information in any decision to	40	The RID, through CARS, will include study results in any decision to repair, alter, or construct training or revetment structures.	Medium	Action	No additional cost (0MM)	No additional cost (0MM)	

MAIN REPORT NO.	RECOMMENDED ACTION NO.	RECOMMENDATION	PROGRAM	IMPLEMENTATION PRIORITY	ITEM	RID IMPLEMENTATION COST	AUTHORITY	
8 (Cont'd)								
		repair, alter, or construct training and revetment structures so that fish and wildlife needs may be considered. (Completion of these studies is necessary in order that fish and wildlife concerns may be properly considered.)						
		d. Based on information obtained in all of the above tasks, evaluate all recurrent dredging sites to determine if regulatory structures could reduce dredging in the area or to determine if shoaling could be induced at areas where the impacts of dredging and disposal operations would be minimal. If so, the RID should optimize benefits to both navigation and fish and wildlife resources in the transport model and wing dam studies. First priority should be given to restoring the back channel closure structures near the Huff-Hunt Island in Pool 20.	41	In FY 81, the RID plans to restore the back channel closure structures near Huff-Hunt Island in Pool 20.	High	Action	\$500,000 (O&M)	
		e. Take actions associated with recurrent dredge sites identified by the Dredging Requirements Work Group.	42	Following the completion of the work near Huff-Hunt Island, the next priorities identified for repair of regulatory structures by the RID are at Ackerman's Cut and Hurricane Island in Pool 11, Keithsburg Lower in Pool 18 and Armstrong Island in Pool 22.	Medium	Action	\$2,000,000 (\$500,000 per year program) (O&M)	

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDED ACTION NO.	PROGRAM	IMPLEMENTATION PRIORITY	IMPLEMENTATION ITEM	RID IMPLEMENTATION COST	AUTHORITY
3 (Cont'd)							
	The RID should provide for mitigation to sites listed by the Side Channel Work Group where, due to past RID activities, backwater areas have lost considerable habitat value (these sites can be found in Section II D of the Side Channel Work Group Appendix).	43	The RID will mitigate losses on a case-by-case basis, as prioritized by the FWIC, if the RID is provided with funding and authority.	Low	Action	\$10,000,000 (0MM)	No current authority; congressional authorization being sought under Recommendation 55 will constitute authority for this action.
	The RID channel maintenance program should insure that a minimum 2-foot under keel clearance is maintained for commercial navigation. Under certain hydraulic conditions, the RID may allow the channel to fall below 11 feet flat pool. To provide a safe navigation channel the RID should:	44	Maintaining a minimum 2-foot under keel clearance is an existing practice of the RID.	High	Action (in progress)	N/A	
	a. Deepen the downbound exit at Lock 15.	45	The rock removal is a high RID priority because of the risk of serious accidents but the high cost makes implementation unlikely.	High	Funding	\$30,000,000; \$ 5,000,000 for a & \$25,000,000 for b (0MM)	
	b. Straighten the channel alignment and remove the rocks in the vicinity of R.M. 489.						
	State and Federal agencies should, in cooperation with each other, initiate a program which would include the following:						
	a. Development studies that show the interrelated economic impacts (benefits and costs) that all industries located in the GREAT 11 study area have on the general economy, especially as they relate to all modes of transportation.						
	b. Detailed studies that assess prime waterway related industries to determine those that are attractive to select communities.						

MAIN REPORT NO.	RECOMMENDED ACTION NO.	RECOMMENDATION	PROGRAM	RIO IMPLEMENTATION		IMPLEMENTATION COST	RIO AUTHORITY
				PRIORITY	ITEM		
9 (Cont'd)	c.	Detailed analysis of the development needs and requirements for these industries.		N/A	Further Study	N/A	
	d.	A study to determine the relationship of all land uses on the UMR to industrial development, and the problems and the needs that result from this relationship.	This study would most likely be accomplished by an agency, such as the Upper Mississippi River Basin Commission (UMRBC), whose primary purpose is related to land use analysis on a regional basis.	N/A		N/A	
	e.	A study to determine the potential for hydropower generation within the GREAT II area.	Studies are underway by the RIO to determine the potential for hydropower generation within the GREAT II area. In addition, private interests have applied for permits to make studies for private development on Federal structures.	High		Action (in progress)	No additional cost (61)
	46						
	11	The RIO should seek adequate funding to provide detailed flood boundary/floodway maps of the UMR corridor, based on detailed hydrographic studies, to be used for flood insurance and flood plain management purposes.	A proposed feasibility study to demonstrate the utility of math modelling the UMR for flood plain management purposes is under consideration by the UMRBC for possible funding by the Water Resources Council in FY 83. The organization and management of the proposed 2-year program will consist of a Special Study Committee under the sponsorship of the UMRBC. This committee will consist of the membership of the disbanded UMRBC Technical Management Task Force. State and Federal agencies could use this model for consistent designations of floodways. Therefore, the RIO will not seek funding to provide detailed flood boundary/floodway maps of the UMR corridor but will continue with this endeavor through their participation on the Special Study Committee.	N/A		N/A	
	47						

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDED ACTION NO.	PROGRAM	IMPLEMENTATION PRIORITY		ITEM	IMPLEMENTATION COST	RID IMPLEMENTATION COST	AUTHORITY
				IMPLEMENTATION PRIORITY	ITEM				
12	The RID should seek funding to examine, in coordination with the USDA, USFWS, and state management agencies, in further detail the products of GREAT I and GREAT II Fish and Wildlife, Side Channel, and Sediment and Erosion Control Work Groups along with other pertinent information to determine if:	48	The RID will cooperate with states and Federal agencies attempting to answer the question of the effects of backwater filling and dredge material disposal on flood heights and will seek funding for a study, if a plan of study, acceptable to all concerned, can be developed.	Low	Funding	\$ 15,000 for POS \$ 100,000 for study (G1)	Section 404(t) of the CWA Act of 1977.		
	a. Sediment accretion in backwaters and subsequent plant succession is affecting flooding.								
	b. Flood plain disposal of dredge material is affecting flooding.								
	Upon completion of this review, the RID should publish the results including technical data which either support or refute the contention that backwater sediment accretion and/or flood plain disposal of dredge material is raising flood levels.								
13	The RID should conduct a complete analysis of the COE policy determination of cancelling recreation lease sites, as per Executive Order 11988, to use such lands for recreation, fish and wildlife, or flood plain management purposes.	49	The phase out policy was established by the Office of the Chief of Engineers (OCE) and applies to St. Paul, Rock Island, and St. Louis Districts. Subsequent to the establishment of the policy, regulations published by OCE have emphasized the need to manage COE lands for the various public purposes established by law and to eliminate habitation and privileged occupancy of those lands. In order to insure a consistent nationwide policy on exclusive use, an OCE committee studied the matter and their findings were that private exclusive use for habitation is "an inappropriate use of public lands and waters at all COE Civil Works projects." All Districts in	N/A	N/A	N/A	Section 4 of the Flood Control Act of 1944 authorized the leases. Executive Order 11988 is the primary directive causing cancellation. Also significant in cancellation are: US Fish and Wildlife Coordination Act of 1958. The Federal Water Project Recreation Act of 1965.		

MAIN REPORT

113 (Cont'd)

RECOMMENDED ACTION NO.

880CBW

RIO  
IMPLEMENTATION  
COST

AUTOMATON

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDATION ACTION NO.	IMPLEMENTATION PRIORITY	ITEM	RID IMPLEMENTATION COST	IMPLEMENTATION AUTHORITY
13 (Cont'd)						

MAIN REPORT NO.	RECOMMENDATION	R/COMMITTEE ACTION NO.	PROGRAM	IMPLEMENTATION PRIORITY	ITEM	R/ID IMPLEMENTATION COST	AUTHORITY
16 (Cont'd)							
17	The RID should extend the rock riprap spit to protect the recreation boat access ramp to Pool 11, located off the Dike Road at L/D 11, from wave action.	51	This site is recognized as requiring protection but will require a local sponsor unless the RID recreation authority is changed.	Low	Action	\$150,000 (0MM)	Recreation Act of 1965 defined the basis of cost-sharing (Public Law 89-72). Also the Fish and Wildlife Coordination Act of 1958.
18	State and Federal management agencies should identify procedures and develop plans designated to promote a litter "Take It Home" campaign. These plans could include:	52	Trash collection facilities and signs are placed at public access sites, overlook areas, and other recreation use areas managed by the RID. Since the responsibility for a successful anti-litter program is shared by the states, the RID will cooperate with them, identifying procedures and developing plans designed to decrease litter problems.	Low	Action	\$30,000 (0MM)	The Flood Control Act of 1962 broadened the authority previously provided the Chief of Engineers under Section 4 of the Flood Control Act of 1944 (recreation at reservoirs) to include recreation as a "full-scale project purpose" on all water resource projects. The Federal Water Project Recreation Act of 1965 defined the basis of cost-sharing (Public Law 89-72).
21	The RID should seek an increase in recreation resource funding to insure appropriate funding for recreation management of the MMR.	53	The RID has requested an additional \$100,000 for Mississippi River recreation in FY 82.	Medium	Funding	\$100,000 per year (0MM)	Same as Recommendation 17.

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDED ACTION NO.	PROGRAM	IMPLEMENTATION PRIORITY		ITEM	RIO IMPLEMENTATION COST	AUTHORITY
				IMPLEMENTATION PRIORITY	ITEM			
22	State and Federal agencies should carefully control and enforce issuance of boat house permits to prevent extended residency, sanitary discharge, aesthetic impacts, and conflicts respective of other uses of the river resource.	54	Currently the RID policy on granting of special use license prohibits the residential use of boat houses. Efforts are currently underway by the RID to further enforce this policy.	Low	Action		\$ 5,000 per year (0&M)	Flood Control Act of 1944.
31	State and Federal agencies should assess the need for additional pump-out facilities and the feasibility of declaring sections of the UMR as "no discharge" areas.	55	The RID would cooperate with state agencies to assess these needs. However, no sanitary pump-out facilities would be established at the locks and dams since they would delay lockages and cause traffic congestion.	Low	Action		\$ 2,000 (0&M)	CW Act of 1977.
36	The RID should, in conjunction with other Federal (Soil Conservation Service) and state agencies, conduct a study of streambank erosion on the main stem and tributaries of the UMR.	56	The RID has already conducted a study of streambank erosion on the Des Moines River; a tributary of the UMR. In the final feasibility report of that study, the report concluded that bank erosion is primarily a natural phenomena but man-made structures contribute to the erosion and that the need for bank erosion protection be studied and monitored on a case-by-case basis. Furthermore, the RID does not acknowledge a cause and effect relationship between bank erosion and dredging.	N/A	N/A		N/A	The RID has no authority to conduct studies on streambank erosion except where Corps projects have affected streambanks or for project protection.
37	The RID should conduct detailed pool-by-pool cross-section surveys, including off channel areas, on an annual basis and provide analysis to the Committee for Assessing Regulating Structures (CARS), Fish and Wildlife Inter-Agency Committee (FWIC), and On Site Inspection Team (OSIT). Based on analyses of these data, the FWIC should develop and implement a program for rehabilitation of critical backwater areas.	57	The RID will proceed with cross-section surveys within the constraints of budget limitations.	High	Action		\$ 30,000 per year (0&M)	General R & H Acts. The RID has no authority as a member of FWIC to implement a program for rehabilitation of critical backwater areas. Congressional authorization being sought under Recommendation 55 will constitute authority for such a program.

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDED ACTION NO.	PROGRAM	IMPLEMENTATION PRIORITY		ITEM	IMPLEMENTATION COST	AUTHORITY
				LOW	HIGH			
38	The RID should identify those harbors and access areas which are poorly designed or improperly located for the rehabilitation or relocation of these areas.	58	The RID has identified Warsaw Small Boat Harbor as being in need of design correction and has requested project approval. The RID will further identify other harbors and access areas which are poorly designed or improperly located. However, even though design changes may improve some boat harbors, all such structures are potential sediment traps and will require periodic maintenance dredging.	Action	No additional cost (\$MM)	Boat harbors and their maintenance were authorized by separate legislation. House Document No. 53/8/72, 23 October 1962, covers the Warsaw Small Boat Harbor.		
39	A Fish and Wildlife Interagency Committee (FWIC) should be designated and funded to provide coordination regarding fish and wildlife matters associated with main channel dredging, dredged material disposal, physical river modifications, backwater management studies, and investigations. The FWIC should be composed of fish and wildlife biologists from Wisconsin, Iowa, Illinois, Missouri, USFWS and COE.	59	The RID will participate as a member of FWIC provided adequate funding is made available.	High	Funding	\$ 7,500 man-year (G1)		Fish and Wildlife Coordination Act of 1958.
41	The RID should investigate a pilot project to determine the feasibility and environmental considerations for dredging a backwater area.	60	The RID will proceed with this pilot project if they are provided with increased funding and authority under the UMR 9-foot navigation project to give equal consideration to benefit fish and wildlife and recreation resources.	Medium	Further Study	\$75,000 (GMM)		No current authority; congressional authorization being sought under Recommendation 55 will constitute authority for this project.
21	The RID should apply the physical, chemical, and biological data from the Burnt Pocket and other side channel alteration studies to other computer models or methodologies to further test and define the capability to predict the biological consequences of alterations to side channels and backwaters.	61	During FY 81 and FY 82, the RID will evaluate the physical, chemical, and biological data from the Burnt Pocket backwater opening. When funds become available, the RID will apply these data to computer models or methodologies to verify the Caylor in regression assimilation model and evaluate the accuracy and	Medium	Further Study	\$10,000 per year (\$MM)		No current authority; congressional authorization being sought under Recommendation 55 will constitute authority for this program.

RECOMMENDED ACTION NO.	RECOMMENDATION	PROGRAM	IMPLEMENTATION		IMPLEMENTATION COST	ITEM	IMPLEMENTATION PRIORITY	IMPLEMENTATION COST	IMPLEMENTATION AUTHORITY
			IMPLEMENTATION	PRIORITY					
(Cont'd)									
62	The RID should investigate the feasibility of using fine sediments for agricultural purposes in the GREAT II area.	application of this model and other computer models as a tool for predicting changes in backwater areas as a result of altering flows through them.	Medium	Further Study	No additional cost (NM)				
63	The RID should complete the dredging and habitat development project and monitoring program described in the Fish and Wildlife Service technical report for Stage IIIC of the Fulton Local Flood Protection Project.	The RID will make available fine sediments from boat harbor dredging, and silt from backwaters if it is shown to be feasible, for beneficial agricultural purposes. Several local sponsors of RID dredged boat harbors have indicated they will make fine sediments available for land improvement. In December 1980, the city of Rock Island, Illinois, agreed to prepare a letter of intent to use material dredged from Sunset Marina for beneficial uses including landscape enhancement.	High	Action	\$ 15,000 for habitat development project; \$5,000/yr for monitoring (C6)				
64	The RID should complete backwater alterations as prioritized by the GREAT II Side Channel Work Group using available funding sources. (Criteria for the determination of appropriate action and backwater areas can be found in Section II D of the Side Channel Work Group Appendix).	Feasibility studies for backwater alterations will be made on a case-by-case basis if the RID is provided with funding and authority.	Medium	Funding	\$200,000 for studies; \$1,500,000 for alterations (NM)				
65	The RID should initiate a research and development program, in conjunction with their Waterways Experiment Station, to determine the equipment necessary for performing large-scale backwater alterations.	The RID will initiate research on equipment to perform large-scale backwater alterations when given the authority to do backwater alterations.	Low	Funding	\$15,000 (NM)				

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDED ACTION NO.	PROGRAM	IMPLEMENTATION PRIORITY		ITEM	RID IMPLEMENTATION COST	AUTHORITY
				IMPLEMENTATION	PRIORITY			
42	The RID, in conjunction with the FWIC, should develop and scope a study to determine the cumulative effects of increased industrial, municipal, residential, and recreational encroachment on fish and wildlife habitat and the effect of environmental regulations on industrial, municipal, residential, and recreational development in the IJMR corridor.	66	With available Master Plan data, current aerial photographs, and on-site inspection, the RID will develop, when funds are made available, and evaluate with respect to total pool resources, a matrix system showing quantitatively where encroachment might occur from increased industrial, municipal, residential, and recreational activities and into what type of habitat and the quality of such habitat. Using this analysis and a literature search of such environmental losses, the RID, in conjunction with the FWIC, will determine the level of compliance of these increased activities and evaluate in respect to use of natural resources and natural successional trends of these resources. Pool 16 will be utilized to work out the details of study methodology and scoping process.	Low	Funding	\$100,000 (G1)	Section 10, R & H Act of 1899, Section 40A, CM Act of 1977.	
43	The RID should complete the winter biological studies recommended in their feasibility report on year-round navigation.	67	The RID has recommended to their higher authority that they initiate an environmental study effort for a minimum of 5 years, with a funding level of approximately \$200,000 each year, to study the IJMR environment during the fall and winter months.	Medium	Further Study	\$1,000,000 (G1)	General R & H Acts.	
44	With State management agencies, the RID/COE and the USFWS should develop and complete a natural history survey to identify those natural, scenic, and cultural areas needing protection. When this survey has been completed, the State agencies should use the information collected to prepare natural and cultural area base plans. The plans should include a system to protect from loss those areas identified in the natural history survey.	68	The RID will cooperate with the state management agencies in the development and completion of a natural history survey.	Low	Further Study	\$ 5,000 (G1)	Preservation of Historic and Archaeological Data Act of 1974. Specifically Sections 206 and 208 of the National Historic Preservation Act Amendments of 1980 (Public Law 96-515).	

MAIN RECOMMENDATION NO. . .	RECOMMENDATION	RECOMMENDED ACTION NO. . .	PROGRAM	IMPLEMENTATION		IMPLEMENTATION COST	IMPLEMENTATION COST
				IMPLEMENTATION PRIORITY	ITEM		
46	The RIO/DOE, in coordination with USISWS, should develop and implement systematic surveys to locate and identify cultural resources in the GREAT II reach of the UMR.	69	The RIO will conduct the surveys when funds become available. The geomorphic and band surveys will have a higher priority than the steamboat and other wreck surveys. The engineering survey of the as-built navigation system as a historic network is a low priority for funding.	Low	Funding	\$100,000 (G1)	

The surveys should incorporate the following activities:

- a. Conducting geomorphic studies of present land surveys and literature and document search of preinundation landscape to determine likely areas or location of buried archaeological sites.
- b. Conducting UMR bank surveys to locate and identify unknown archaeological sites which are being affected by wave action.
- c. Conducting a thorough historical records search and evaluation to identify location of known steamboat wrecks.
- d. Expanding administrative policy on removal of sunken wrecks and obstructions.
- e. Conducting a historic architectural/engineering survey of as-built navigation system structures as a significant historic network.

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDED ACTION NO.	PROGRAM	IMPLEMENTATION PRIORITY	ITEM	RIO IMPLEMENTATION COST	AUTHORITY
47	The NCD should conduct regular workshops at the Division level for District staff and State preservation program staff.	70	The NCD plans to hold annual meetings which will include state representatives.	Medium	Action (NCD)	N/A	National Historic Preservation Act Amendments of 1980.
49	The state and Federal agencies in the GATE II area should fund the development and implementation of a comprehensive public education and information program by the accomplishment of:	71	Due to the efforts of several agencies, such as the COE, Fish and Wildlife Service, and the US Coast Guard, the recommended public education and information program largely exists.	High	Action (in progress)	No additional cost	Specific project authorizations.

a. Development and distribution of signage, programs, and literature on the opportunities and facilities of the UMM especially as it relates to recreation and navigation.

b. Development and distribution of signage, programs, and literature promoting the value of the resources of the UMM, and the need for wise management of these resources, especially as it relates to fish and wildlife resources, cultural resources, water quality, dredged material, and soil conservation measures.

c. Development and distribution of signage, programs, and literature describing the management programs of the UMM, especially as it relates to flood plain management and development.

d. Development of public education programs on safety and litter (including mandatory safety/operation education procedures for boat rental companies).

MAIN REPORT NO.

RECOMMENDATION

RECOMMENDED ACTION NO.

RID IMPLEMENTATION COST

AUTHORITY

49 (Cont'd)

e. Development of programs to channel control structures where suitable to allow safe passage of recreational craft and establish no-wake areas in high density use areas.

50 Future public participation and formation programs by Federal and state agencies might be improved by using the following guidelines:

a. The public problem identification process should be included as part of the reconnaissance development phase.

b. The establishment of a well balanced small citizens group should be considered in studies of large scope and covering a large geographic area.

c. General informational public meetings should not be used for studies of large scope, long duration, and covering large geographic areas. Less expensive and more effective means such as newsletters, media releases, and personal letters are more effective.

d. The study sponsors should explore the use of one or more intensive workshops for interested public concerns.

Specific project authorizations.

IMPLEMENTATION PRIORITY

The guidelines outlined in subparagraphs a, b, d, e, and f are practiced or considered in the RID's current public involvement program.

High

ITEM

IMPLEMENTATION COST

PROGRAM

ACTION NO.

RECOMMENDED

MAIN REPORT NO.

MAIN REPORT NO.	RECOMMENDATION	RECOMMENDED ACTION NO.	IMPLEMENTATION PRIORITY			ITEM	IMPLEMENTATION COST	RIO IMPLEMENTATION COST	AUTHORITY
			PROGRAM	ITEM	IMPLEMENTATION PRIORITY				
50 (Cont'd)									
	e.	Every study should have a person or persons available to "go on the road" with information for interest groups, governmental bodies, etc., in the study area.							
	f.	Special efforts should be made to work with local government units where a study has a direct impact on a local government.							
	g.	An integral part of any study budget (5% to 10%) should be the funding of a solid public participation and information program with adequate staffing.							
	h.	Consideration should be given to use of independent staff and office facilities in multi-agency studies.							
		Public involvement is an integral part of the RIO water resource studies. Although a comprehensive public information program is designed and carried out for each study, the public information program does not require a fixed percentage of a study's funding. Study by study, public information budgeting has shown itself to be the most effective and cost efficient within the RIO.							
		The use of independent staff and office supplies is considered and utilized in studies involving several agencies but headed by the RIO.							
		The RIO has an inventory under way and will decide on future action upon its completion.							
51	The RIO should institute a program to arrange and manage the archives of the District.	73				Medium	Action (In progress)	No additional cost	N/A
52	The Upper Mississippi River Basin Commission (UMRC) through the Great River Study Committee (GRSC) should continue to develop a total river resource management plan by incorporating into the UMRC planning activities the items recommended by GREAT II for further study and policy changes.	74				High	Action (WCD)	N/A	N/A

MAIN REPORT NO.	RECOMMENDATION	RI COMMITTEE ACTION NO.	PROGRAM	IMPLEMENTATION		IMPLEMENTATION COST	AUTHORITY
				ITEM	IMPLEMENTATION PRIORITY		
53	To insure that ongoing implementation coordination of components of the GREAT II recommended plan occurs, an Ongoing River Resource Management Team (ORRMT) similar to that of GREAT II should be established. The ORRMT should be composed of one representative from each of the participating state and Federal agencies with the RID and State of Iowa responsible for the initial co-chairmanship.	75	The RID supports implementation of this recommendation and through their Operations Division will actively co-chair the ORRMT and immediately coordinate with the State of Iowa to set up an organizational meeting of the ORRMT. All proposed member agencies of the ORRMT will be responsible for designating and funding their agency representative.	Action	High	\$50,000 per year (O&M)	General R & H Acts and specifically, the CW Act of 1977.
54	To help facilitate completion of a total river resource management plan for the UMR, the ORRMT, through the member agencies, should develop a complete computerized resource information system for all resources and resource users in the UMR corridor.	76	The RID, through their membership on the ORRMT, will cooperate in the development of a comprehensive computerized resource information system for the UMR.	Action	Low	\$ 5,000 (O&M)	General R & H Acts.
55	Congress should provide the COE with increased funding and authority associated with the UMR 9-foot navigation project to give equal consideration and to complete measures to benefit fish and wildlife and recreation resources. All measures carried out under this authority must be coordinated fully with and agreed to by all agencies having state and Federal fish and wildlife resource management responsibilities in the affected areas.		The RID endorses this recommendation.	N/A	N/A	N/A	Congressional authority required.
56	Congress should amend Public Law 89-72 to allow the RID, with the approval of affected agencies, to develop and maintain recreation areas on Corps general plan lands on the UMR without local cost sharing.		The RID endorses this recommendation.	N/A	N/A	N/A	Congressional authority required.

NCPDP (July 1981) 1st Ind 31 July 1981  
SUBJECT: GREAT I and GREAT II (Upper Mississippi River Resource Management

DA, North Central Division, Corps of Engineers, 536 South Clark Street,  
Chicago, Illinois 60605

TO: Cdr, USACE (DAEN-CWP-C), WASH DC 20314

I recommend that the implementation reports of the District Engineers for GREAT I and II, and the inclosed public notice summarizing the two studies, be provided to the Congress for its information.

**Inclosure  
Public Notice**

*Scott B Smith*  
SCOTT B. SMITH  
Brigadier General, USA  
Commanding



DEPARTMENT OF THE ARMY  
NORTH CENTRAL DIVISION, CORPS OF ENGINEERS  
536 SOUTH CLARK STREET  
CHICAGO, ILLINOIS 60605

NCDPD

31 July 1981

NOTICE OF THE FINAL REPORT  
FOR  
GREAT I AND GREAT II  
(Great River Environmental Action Team)  
UPPER MISSISSIPPI RIVER RESOURCE MANAGEMENT STUDY

This announcement is to notify the public that the final reports for GREAT I and GREAT II have been completed by the District Engineer, St. Paul, and District Engineer, Rock Island, and the Division Engineer, North Central Division, U. S. Army Corps of Engineers.

INTRODUCTION

The GREAT I study, initiated in 1974, covers the St. Paul District portion of the Upper Mississippi River from Minneapolis/St. Paul, Minnesota, to Guttenberg, Iowa. The GREAT II study, initiated in 1976, covers the Rock Island District portion of the river from Guttenberg, Iowa, to Saverton, Missouri. Both studies began because of concerns over the environmental impacts of methods used to operate and maintain the navigation system on the Upper Mississippi River. The GREAT studies were conducted by Federal-State interagency teams under the guidance of the Upper Mississippi River Basin Commission. They considered all aspects of the river including dredging requirements and equipment needs for channel maintenance, use of dredged material, commercial transportation, floodplain management, recreation, water quality, sediment and erosion control, fish and wildlife, and preservation of cultural and aesthetic values. The GREAT Teams developed recommendations in all of these areas; many of the recommendations were directed at the Corps of Engineers for implementation. To supplement the GREAT reports, the St. Paul and Rock Island District Engineers have prepared reports outlining how they intend to implement the GREAT Team recommendations in their respective Districts. Both District Engineers intend to implement, through the established budgeting process, what they consider high priority recommendations at an estimated cost increase of \$3 million annually in the St. Paul District and \$2 million annually in the Rock Island District.

STUDY AUTHORITY

The principal authority for these reports is Section 117 of the Water Resources Development Act of 1976 (Public Law 94-587). Section 117 reads:

The Secretary of the Army, acting through the Chief of Engineers, is

authorized to investigate and study, in cooperation with interested States and Federal agencies, through the Upper Mississippi River Basin Commission the development of a river system management plan in the format of the "Great River Study" for the Mississippi River from the mouth of the Ohio River to the head of navigation at Minneapolis, incorporating total river resource requirements, including, but not limited to, navigation, the effects of increased barge traffic, fish and wildlife, recreation, watershed management, and water quality at an estimated cost of \$9,100,000.

#### BACKGROUND

In the 1960's and early 1970's, conservation organizations, commercial fishermen, biologists, and sportsmen expressed concern over the environmental impacts of methods used to operate and maintain the navigation system of the Upper Mississippi River. Their concerns were directed to the U. S. Army Corps of Engineers, the agency assigned by Congress to maintain the navigation system. In 1974, the St. Paul and Rock Island Districts completed Environmental Impact Statements (EIS) in accordance with the National Environmental Policy Act of 1969. The EIS described the effects of the Corps of Engineers' operation and maintenance program on the Upper Mississippi River. These documents concluded that sediment from uplands and streambanks, as well as placement of dredged material, was damaging the river's biologically productive backwaters, marshes, and sloughs. The EIS also revealed that little information was available on many other aspects of the river. The lack of information made it difficult for government agencies or the Congress to evaluate ways to manage the river while balancing the demands of competing uses.

As a result of growing congressional and public interest in the problems of the Upper Mississippi River, the North Central Division Engineer of the Corps of Engineers and the North Central Regional Director of the U. S. Fish and Wildlife Service announced in September 1974 the establishment of a partnership team to work out long-range management strategies for the multi-purpose use of the river. In October 1974, this team evolved into GREAT--a working partnership of Federal agencies, States, and the public--under the sponsorship of the Upper Mississippi River Basin Commission.

The Team, established in 1974, was called GREAT I and studied the Upper Mississippi River from Minneapolis/St. Paul to Lock and Dam 10 at Guttenberg, Iowa. GREAT II was organized in 1976 and studied the river from Guttenberg to Saverton, Missouri. GREAT III was organized in 1977 and encompasses the Mississippi River from Saverton to the mouth of the Ohio River. The GREAT I Team Report was completed in September 1980, and the GREAT II Team Report was completed in December 1980. The GREAT III report is scheduled to be completed in fiscal year 1984.

### STUDY TEAM ORGANIZATION

The GREAT Teams were made up of representatives from the following State and Federal agencies:

#### GREAT I

U. S. Department of the Army  
Corps of Engineers  
St. Paul District

U. S. Department of the Interior  
Fish and Wildlife Service  
Region III

U. S. Department of Agriculture  
Soil Conservation Service  
Minnesota Office

U. S. Department of Transportation  
Coast Guard - 2d District

U. S. Environmental Protection Agency  
Region V

State of Iowa  
Iowa Conservation Commission

State of Minnesota  
Department of Natural Resources

State of Wisconsin  
Department of Natural Resources

Upper Mississippi River Conservation  
Committee - Nonvoting Member

Minnesota-Wisconsin Boundary Area  
Commission - Nonvoting Member

#### GREAT II

U. S. Department of the Army  
Corps of Engineers  
Rock Island District

U. S. Department of the Interior  
Fish and Wildlife Service  
Region III

U. S. Department of Agriculture  
Soil Conservation Service  
Iowa Office

U. S. Department of Transportation  
Coast Guard - 2d District

U. S. Environmental Protection Agency  
Region VII

State of Iowa  
Iowa Conservation Commission

State of Illinois  
Department of Transportation and  
Department of Conservation

State of Missouri  
Department of Conservation and  
Department of Natural Resources

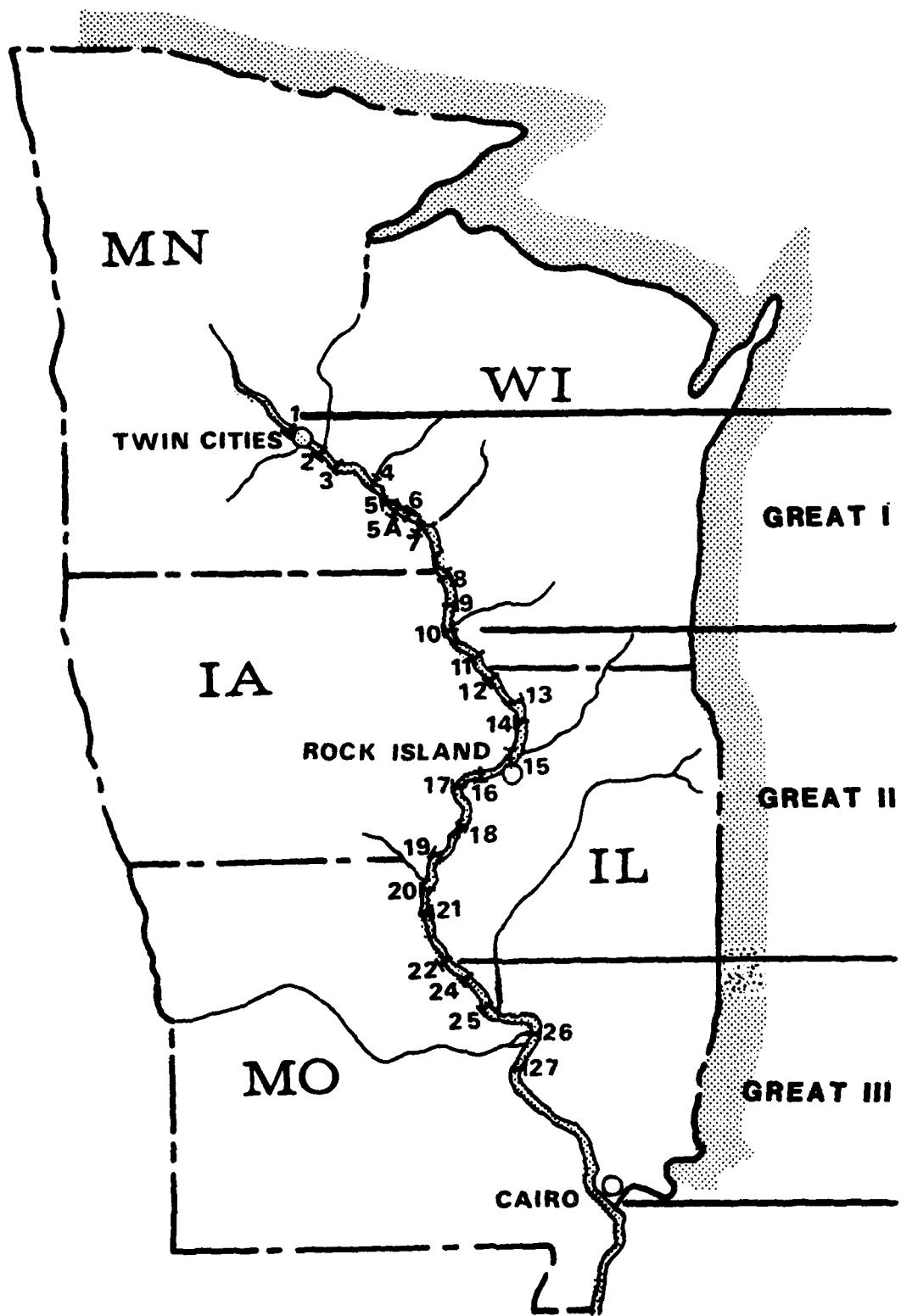
State of Wisconsin  
Department of Natural Resources

Upper Mississippi River Conservation  
Committee - Nonvoting Member

### DESCRIPTION OF STUDY AREA

#### The Navigation Project

The Upper Mississippi River 9-foot channel navigation project, extending from the mouth of the Missouri River to Minneapolis, a distance of 658 miles, was authorized by Congress in 1930. A map of the project is shown on page 4.



## UPPER MISSISSIPPI RIVER

**GREAT STUDY REACHES & LOCKS AND DAMS**

The principal engineering features are 29 locks and dams, spaced at irregular intervals to maintain a 9-foot navigation channel. All locks of the system were originally built to provide a width of 110 feet and a length of at least 600 feet, with the exception of the Upper and Lower St. Anthony Falls Locks and Lock No. 1, located near the head of navigation within the city of Minneapolis. These locks at the head of navigation have a width of only 56 feet and a length of 400 feet. Lock No. 19 at Keokuk, Iowa, is 1,200 feet in length and opened in May 1957. Locks No. 27 at the Chain of Rocks Canal near St. Louis was opened in 1953 and consists of one 1,200-foot main lock and one 600-foot auxiliary lock. Construction of a 1,200-foot replacement for Locks and Dam No. 26 at Alton, Illinois, is currently underway. The general location and number of locks and dams necessary for the project were fixed by the river profile. The practicable heights of the dams were limited by flowage damage. So far as possible, the locks and dams were located in fairly straight stretches so as to avoid cross-currents and to afford navigation easy upstream and downstream approaches.

The navigation dams on the Upper Mississippi River were constructed to regulate water level stages of the river at low flow and to pass high river flows without raising river stages above those that would exist without the dams. The dams are provided with gates which can be raised to permit the flow of the river to pass underneath them, as under natural conditions. Thus, at high water, the river surface profile will have practically the same slope as in a natural state; while at low water, the river consists of a series of reservoirs providing a stairway for waterborne traffic.

The dams are spaced at intervals varying from 0.4 to 46.3 miles. The average pool length is 25 miles. The lift of locks varies from 5.5 to 49.2 feet with an average lift of 12.9 feet. The area encompassed by GREAT I and GREAT II extends from the head of navigation to Lock and Dam No. 22.

#### Fish and Wildlife Values

The Upper Mississippi River valley supports one of the most diverse ecological communities in terms of habitat and species abundance and variety on the North American continent. The unique plant and animal life of the valley results from the overlapping of eastern and western species and an intrusion of southern species up the river valley.

Before construction of the locks and dams system, the river bottoms were primarily wooded islands. The islands also contained some hay meadows and small farming areas. Deep sloughs were the rule, but hundreds of lakes and ponds were scattered through the wooded area. Marshes were limited to the lakeshores and ditches leading off the sloughs. These marshes often dried up completely. Fish rescue work was a big activity, with crews rescuing fish trapped in bottomland lakes and ponds when the river receded.

In the early thirties, the Corps of Engineers initiated work on the 9-foot channel commercial navigation project. Resulting impoundments abruptly changed the river bottoms from areas of wide fluctuations in pool levels to areas of semistabilized water in which, while spring floods still occur, the bottoms do not dry out in the summer. Thus, instead of wooded islands and dry marshes, marsh and aquatic habitat with fairly stable water levels are available throughout the year.

In each of the pools, three distinct zones occur. The upper end of each pool is in essentially the normal river condition where the water levels were not raised to any large extent. In this portion of the pools, marsh development is limited and the old conditions of deep sloughs and wooded islands are found. In the middle portion of each pool, impoundment backed up water over islands and old hay meadows, spreading out over large areas of comparatively shallow water. It is in the middle portion of the pools that the best marsh development occurred. Immediately above each dam, the water was impounded to a depth which precluded marsh development; at present, this area is essentially deep, open water in which some aquatic growth occurs, but in which there is practically no marsh.

Two extensive wildlife refuges are located on the Mississippi River. The Upper Mississippi River Wild Life and Fish Refuge, authorized in 1924, extends from Wabasha, Minnesota, mile 760, to Rock Island, Illinois, mile 490. The Mark Twain National Wildlife Refuge, established in 1958, covers the area from Rock Island, Illinois, mile 490, to St. Louis, Missouri, mile 195. About 227,000 acres of refuge lands are distributed along 534 miles of the Mississippi River. The river valley is best known for its value as a migratory corridor for birds, especially waterfowl, of international significance.

#### The Problem of Sedimentation

In a free-flowing river, erosion and sedimentation maintain a longterm equilibrium. Sediment deposits in the marshes and backwaters are balanced by the river's creation of new channels and wetlands. The wing dams and closing dams system that preceded the locks and dams stabilized the alignment of the main channel and enhanced the river's ability to transport sediment. Formation of the navigation pools created thousands of acres of wetlands and backwater, but reduced the river's ability to transport sediment through the natural scouring process. Approximately one-quarter of the open water area present when the lock and dam system was completed has become marshland.

The primary source of fine sediments which settle out and clog the backwaters is erosion from farmlands. However, a reduction in erosion alone would not necessarily solve the problem. Sedimentation and shoaling also depend on the river's energy dynamics and local geography as well as the availability of suspended sediment.

Sand sediments which accumulate and cause shoaling must be dredged to maintain the navigation channel. The primary source of the sand which fills the main channel is streambank erosion from tributaries. The majority of this sand in the GREAT I area appears to come from key sand-producing tributaries; the greatest single contributor of sand is the Chippewa River in Wisconsin. GREAT II studies do not show the same correlation between tributary sand inputs and dredging requirements.

Thus, the problems confronting resource managers are whether the backwater sedimentation can be counteracted, and where and how to dispose of coarse sediments dredged from the navigation channel.

### SCOPE OF THE GREAT STUDIES

The overall goal of the GREAT studies was to develop a river system management plan as specified in the authorizing legislation. To further this goal, the GREAT I and GREAT II study teams conducted investigations in the following areas.

Channel Maintenance - The Teams identified environmentally sound procedures for the Corps of Engineers to follow in conducting dredging operations and placing dredged material. They agreed on methods that would protect environmental values; provide for beneficial use of the dredged material; and build a recognition of water quality, floodplain management, and recreation needs into the process. The GREAT I Channel Maintenance Plan is a detailed, site-specific dredged material placement plan. The GREAT II Team developed a procedure for selection of placement sites as outlined in a Channel Maintenance Handbook.

Commercial Transportation - The study participants addressed such issues as removing existing constraints and providing for future expansion of navigation traffic; evaluating the requirements for navigation safety in regards to channel dimensions, obstructive bridges, and other hazards; providing adequate mooring and fleeting areas; and the demand for and importance of river transportation.

Commercial, Industrial, and Utility Development - Studies were outlined to continue commercial and industrial activities in a manner that would protect the environment.

Floodplain Management - Participants dealt with the problems of inconsistent floodplain laws, regulations, and enforcement programs between the States and agencies involved and identification of the effects of sediment buildup on flood stages.

Recreation - Recreation work groups evaluated recreation needs, proposed additional recreational facilities, and investigated congestion at locks with heavy recreation use. They also considered beach nourishment with dredged material and the issue of private leases of Federal lands.

Water Quality - These efforts focused on developing consistent water quality criteria among States and Federal agencies, promoting enforcement of existing regulations to protect the river water and establishment of monitoring stations below large urban areas and waste pretreatment programs in certain areas. Studies on the water quality effects of navigation and of mechanical and hydraulic dredging were conducted.

Sediment and Erosion - These studies collected and evaluated data to describe the relationship between upland and streambank erosion and the sedimentation of Mississippi River backwaters. They also attempted to determine sedimentation rates in open-water areas. Upland watershed treatment programs (such as reduced-tillage farming) were also addressed.

Fish and Wildlife - The fish and wildlife studies emphasized collection and analysis of information to better document and assess impacts on fish and wildlife of the river from municipal, residential, industrial, navigational, and recreational encroachments. Team members also evaluated methods to improve

habitat in backwater areas by changing the amounts of flow entering the backwater through side-channel openings.

Cultural and Aesthetic - These studies addressed preservation of qualities essential for human enjoyment of the river corridor.

Dredging Requirements, Dredged Material Uses, and Material and Equipment Needs - The factors which affect dredging requirements were analyzed, including depth and width relationships, effectiveness of sediment control on tributaries, and sediment transport modeling. The potential uses and users of dredged material were identified and evaluated. Potentially usable types of dredging equipment were studied, and techniques were investigated for estimating dredging costs using alternative dredging equipment.

#### PRODUCTS OF THE GREAT STUDIES

The partnership nature of the GREAT I and GREAT II study efforts resulted in completion of GREAT I and II "Team Reports", which contain recommendations for the Corps of Engineers, other Federal agencies, States, local governments, and the public. To provide a vehicle for following up on recommendations addressed to the Corps of Engineers, each District Engineer produced an Implementation Report. The Implementation Reports contain information about the costs, legislative authorities needed, and District priority ratings for carrying out these recommendations. The reports are suitable for processing by the organizational review levels of the Corps. Throughout the GREAT studies, the Corps' voting Team members attempted to play a positive role; they did not vote against recommendations where the Corps could, in good faith, take at least some positive action. The Implementation Reports have carried forward this philosophy.

#### The GREAT I Implementation Report

The Implementation Report for GREAT I highlights the St. Paul District's program to address the 112 recommendations of GREAT I. Eighty of these recommendations are directed at the St. Paul District for implementation. The Implementation Report describes three levels of implementation, from a "Basic Program" with no additional funding being available, to a Full GREAT I program which includes actions required by the District to fully implement all appropriate recommendations. A "First Priority Program" is presented; this is the District recommendation for implementation of GREAT recommended actions through FY 1988. The Basic Program includes 27 of the GREAT I Team recommendations; the First Priority Program includes 25 additional recommendations. The Full GREAT I Program would include 28 more recommendations.

If the recommended First Priority Program were implemented, it would require an increased operation and maintenance funding of about \$3 million annually. Implementation of the GREAT I Channel Maintenance Plan is included in the First Priority Program; however, variances to certain State laws and regulations would be necessary for full implementation of the Channel Maintenance Plan.

This funding would, over time, enable the St. Paul District to implement the Channel Maintenance Plan (including detailed evaluations of selected placement sites, coordination of necessary revisions to the plan, acquisition of rights on private land from voluntary sellers for placement of dredged material where it is clearly in the best interest of the river resource, reduction of dredging quantities, and development of long-term plans for placement site use) at an average increase of about \$2.4 million annually. Additionally, an average of about \$550,000 annually would be used to address the following: (1) a demonstration dredging program to better determine the most efficient equipment and method of dredging, plus a reconnaissance evaluation of riverine placement; (2) monitoring of water quality impacts and coordination with the States and EPA on development of consistent criteria for sediment and water quality; (3) computer modelling of sediment transport, study of sediment control on the Chippewa River, and development of technical relationships at the underwater deltas of tributary streams for downstream dredging needs; and (4) rehabilitation studies for critical backwater areas such as Weaver Bottoms and Spring Lake, providing lockage waiting areas for recreational craft to address capacity problems at Locks and Dams 2 and 3, and determining the need to repair or modify individual wing dams.

Not included in the first priority program are \$6 million additional in average annual costs for the Full GREAT I program. This program would include mainstem shoreline protection at locations designated by the GREAT I Fish and Wildlife Work Group, sanitary pump-out facilities at locks, and modification and extensive marking of wing dams.

Increases in overall benefits from the project would result from implementation of the recommended actions. The primary gains would be to fish and wildlife, recreation, and water quality values. The loss of prime fish and wildlife habitat to placement sites for dredged material would be significantly reduced.

#### The GREAT II Implementation Report

The Implementation Report for GREAT II identifies 72 recommended actions for implementation; 69 by the Rock Island District and three by the North Central Division. The District has ranked these actions into high, medium, and low categories with 39 as high priority, 17 as medium priority, and 16 as low priority.

Implementation of the high priority programs would require an increase of approximately \$2 million annually through at least FY 86. About \$900,000 annually is needed in the District's channel maintenance activities to bring more flexibility to dredge material disposal. This flexibility is needed for increased transport capability, improved site preparation, better return water control, revegetation, and mitigation for damaged environments. The remaining \$1.1 million average annual expenditure during this time frame would be used to (1) conduct advance planning of the Upper Mississippi River navigation system so that locks whose capacity will be exceeded can be studied in accordance with existing legislation, (2) study navigation effects on the Upper Mississippi River environment during the fall and winter, (3) conduct detailed pool-by-pool cross section surveys, and (4) complete the District Mississippi River recreation and resource master plan in a timely manner.

Implementation of the medium priority programs would require an additional increase of approximately \$4.5 million in one-time costs and \$0.5 million in annual costs. This additional expenditure would be used to (1) construct a mooring cell just north of Lock 22, (2) extend the upper and lower guidewalls at Locks 20, 19, and 22, (3) refine the existing two-dimensional sediment transport model to assess the effectiveness of regulatory structures near chronic dredging areas, (4) complete backwater alterations, (5) investigate a pilot project to determine the feasibility and environmental considerations of dredging in backwater areas, (6) increase annual recreation resource funding to assure appropriate funding for recreation management of the Upper Mississippi River, and (7) increase annual funding for restoration of recurrent dredge site regulatory structures.

To implement low priority programs, an additional \$11 million would be required predominantly for mitigation of sites where backwater areas have lost considerable habitat value. Also included in the low priority programs would be (1) the establishment of boat launching facilities (2) promotion of a litter "Take It Home" campaign, (3) initiation of a research and development program to determine equipment necessary for performing large-scale backwater alterations, (4) implementation of systematic surveys to locate and identify cultural resources in the GREAT II reach of the Upper Mississippi River, and (5) a study to determine the cumulative effects of increased industrial, municipal, residential, and recreational encroachment on fish and wildlife habitat.

#### CONCLUSIONS

Draft copies of the St. Paul and Rock Island District Implementation Reports were distributed for review to agencies that actively participated in the GREAT I and GREAT II studies. Comments received and responses and discussion of the comments are contained in the final copies of the Implementation Reports. The comments were valuable in development of the following conclusions.

Implementation of GREAT Recommendations - Funding to implement the GREAT recommendations will be integrated into the annual NCD budget request. These recommended actions will compete for funds, through the established budget ranking process, with other Corps and Federal programs. Implementation of the recommended programs would require additional funds for the St. Paul and Rock Island Districts totaling approximately \$5.0 million annually through at least FY 1986.

Water Quality Considerations - The Clean Water Act required extensive changes in operation and maintenance activities to protect water quality values. Section 404(b) requires an evaluation of individual proposed dredged material placement sites to comply with guidelines issued by the U. S. Environmental Protection Agency (EPA). Section 404(t) of the Clean Water Act requires the Federal Government to comply with State laws and regulations in the discharge of dredged material into navigable waters. One step in the procedure for compliance is obtaining a permit from the appropriate State agency. Problems have arisen with conditions attached to the permits by the State regulatory agencies. The Corps believes that environmental problems which can result from placement of dredged material in the Mississippi River relate more to physical impacts of placement than to water quality impacts since most of the material is essentially clean sand.

The GREAT reports recommend that EPA develop water quality criteria for dredging and material placement that would lead to adoption of uniform requirements by the States for dredged material placement.

The North Central Division Engineer has requested the Regional Administrator, Region V, EPA to establish objective criteria for water quality as it relates to dredged material placement for the Upper Mississippi River. These criteria would furnish the basis for further discussions with the involved States regarding conditions for State permits. The Corps intends to observe State requirements--and is legally bound to do so under Section 404(t).

Cost Considerations in Placement Site Selection - Before placing dredged material on a proposed site, the District will conduct a Section 404(b) evaluation. The District will consider the GREAT site as the primary site, but will evaluate alternative sites to determine if the GREAT site is justified, recognizing environmental, social, and economic factors. If the GREAT site is selected, it will be submitted to the EPA for approval. If the EPA disapproves the site or our 404(b) evaluation identifies a more appropriate site, the newly proposed site will be referred for consideration to the Districts ongoing site-selection forum (the interagency group continuing the GREAT Team's coordination role). This procedure will assure that site-specific recommendations are justified prior to implementation.

A comparison of channel maintenance costs prior to the GREAT studies with more recent costs would reflect not only changes resulting from GREAT, but also differences in the shoaling rates, differences in the dredged volumes during those years, and increased costs to comply with recent environmentally-oriented legislation. In an effort to reduce the costs of channel maintenance, while still complying with necessary environmental constraints, investigations of riverine placement have been initiated. This procedure would place clean dredged material in the deepest portion (thalweg) of the channel, where stronger currents can carry it downstream so that sediments will not collect in backwaters or cause undesirable shoaling. This method is thought to be particularly feasible in the GREAT II area. Additional studies must be conducted to determine where, when, and how placement can be accomplished using the river's existing sediment transport system, without undue environmental impacts. This method would retain the river sediment in its natural regime for transport through the river system.

#### Definition of Project Depth

The Corps has the authority to maintain the channel for 9-foot draft vessels. Historically, the Corps has dredged to a depth of 11 feet below low control pool to provide a stable channel for 9-foot draft vessels, and up to an additional 2 feet of advance maintenance to provide capacity for future shoaling. Low control pool is the minimum water surface elevation. It is determined by considering the maximum allowable drawdown downstream and zero flow conditions upstream. Concerns have been voiced that reducing dredging depths as recommended by GREAT I would threaten the safety of commercial navigation. The Corps believes reduced-depth dredging means simply that we would not in every case dredge the additional 2 feet of depth for advance maintenance. Reducing advance maintenance dredging

will be done where there will be no significant increases in frequency of dredging or impacts on navigation safety. The dimensions of the navigation channel exclusive of the advance maintenance will remain the same as originally authorized. Dredging depths at approaches to rigid structures such as locks, bridges, piers, or other potential safety hazards will be determined by technically supported safety criteria rather than dictated solely by a desire to minimize dredging quantities. The Corps of Engineers and the U. S. Coast Guard will cooperate in an investigation concerning the effects on safety of intermittent shallow underkeel clearances for barge tows in an irregular (natural) channel.

#### Corps Purchase of Land for Dredged Material Placement

The Corps has authority to purchase rights or land for placement of dredged material. Congress would be advised, through the budget process, of contemplated and actual purchases. It is the Corps' policy not to invoke eminent domain and acquire land by condemnation proceedings for this purpose.

#### Fleeting Areas

The GREAT Teams have discussed studies to assess the impacts of proposed and existing barge fleeting areas in the Upper Mississippi River; the results of the studies were proposed to be used in the consideration of permit applications for additional fleeting areas. District Engineers will continue to cooperate with the States to resolve problems of fleeting areas within current Corps of Engineers policies.

#### Coordination in the Field

Both the GREAT I and GREAT II Study Teams recommended that continuing forums be established for field coordination of dredging activities and placement site selection. The responsibility for decision-making would remain with the Corps of Engineers. However, the GREAT studies have demonstrated the value of the interdisciplinary approach to channel maintenance activities. The Corps seeks to avail itself of the expertise residing in other Federal agencies, State agencies, universities, and private consultants. Representatives of commercial navigation will also be encouraged to contribute their valuable knowledge and experience.

#### GREAT Recommendations Requiring Changes in Congressional Authorities

Almost all of the actions recommended for Corps of Engineers implementation can be implemented within presently available authorities. The primary recommendation which would require Congressional action is authorization of full Federal funding of projects on the Upper Mississippi River for recreation and fish and wildlife. The Corps presently has authority to accomplish these purposes in connection with the existing navigation project; however, cost sharing with a local sponsor is required. Because of the multi-State nature of the river, identification of a willing local sponsor has been difficult. Recommendations concerning this issue in the GREAT I and GREAT II reports would represent a change in national policy.

Issues of this type (policy issues as opposed to project feasibility determinations) are normally considered through the Army Civil Works Legislative Program. This process involves: (1) identification and analysis of legislative needs which require new or amending legislation, (2) "packaging" of such legislative needs into a summary "legislative program" for submission by the Army to the Office of Management and Budget (OMB) together with the Civil Works annual budget submission, and (3) drafting of legislation within the Office, Chief of Engineers to supplement each item in the OMB-approved legislative program for submisssion to Congress.

At this time of fiscal austerity, the North Central Division does not intend to recommend a change in national policy to provide full Federal funding of projects for recreation and fish and wildlife on the Upper Mississippi River. This item could be considered in future submissions to the Army Civil Works Legislative Program.

The GREAT reports also recommend that Congress provide a clearer definition of the channel depth to be provided for the Upper Mississippi River navigation project. The North Central Division believes the channel depth to be maintained by the Corps has been adequately defined by existing legislation and past maintenance practices and that additional congressional action is not needed.

#### GREAT Recommendations Deferred

The ranking of GREAT recommendations for Corps of Engineers action was done by the involved District Engineers; it was not part of the Team report. Recommendations for immediate implementation were selected using the criteria of urgency, financial resources, organizational resources, and the priorities of the new administration. No recommendations were considered to lack merit--those "deferred" simply failed in competition with recommendations judged to be more important or suitable at this time. As the objectives of some recommendations are achieved or as funds become available from other sources, these "deferred" recommendations will be reconsidered.

#### GREAT Recommendations for Other Agencies

Thirty-two recommendations of the GREAT I Team and twenty-four recommendations of the GREAT II Team were applicable to organizations other than the Corps of Engineers, such as the U. S. Fish and Wildlife Service, U. S. Environmental Protection Agency, the U. S. Coast Guard, the State recreation or environmental agencies, municipalities, county agencies, industry groups, and public interest groups. Through the established process for developing approved regional water resources plans, the Corps of Engineers will participate with the other involved agencies in monitoring implementation of all GREAT recommendations.

#### ACTION

Having reviewed the reports of the GREAT I and GREAT II Teams and the Implementation Reports of the St. Paul and Rock Island District Engineers, I have determined that I, as Division Engineer, North Central Division, U. S. Army Corps of

Engineers, will:

Support increased annual budgets for the St. Paul District and the Rock Island District to implement the first priority GREAT recommendations.

Request that the Region V Regional Administrator of the Environmental Protection Agency establish objective criteria for water quality as it relates to dredged material placement for the Upper Mississippi River.

Instruct the St. Paul and Rock Island District Engineers to consider the GREAT-identified placement site as the primary site when conducting Section 404(b) evaluations for proposed dredging actions.

Support the St. Paul and Rock Island District Engineers in their investigations of riverine thalweg placement of clean dredged material.

Instruct the St. Paul and Rock Island Districts to continue to maintain the navigation channel for 9-foot draft vessels consistent with past definition of the channel. Advance maintenance dredging will be minimized consistent with vessel safety and maintenance cost considerations.

Support the St. Paul and Rock Island District Engineers in the purchase of land rights--from willing sellers--for placement of dredged material where it is clearly in the best interest of the river resources.

Instruct the St. Paul and Rock Island Districts to continue to cooperate with the States in the establishment and permitting of barge fleeting areas in accordance with Corps of Engineers policies.

Instruct the St. Paul and Rock Island District Engineers to continue the spirit of cooperation and coordination developed during the GREAT studies through the establishment of ongoing river management forums.

Take no action at this time to propose a change in national policy to provide full Federal funding of projects for recreation and fish and wildlife on the Upper Mississippi River.

Insure an annual reevaluation of those GREAT recommendations not being scheduled for implementation at this time.

#### RECOMMENDATION

I recommend the reports of the District Engineers be provided to Congress for its information.

#### REVIEW PROCESS AND ADDITIONAL PUBLIC INPUT

In accordance with law, these reports are being referred for review to the Board of Engineers for Rivers and Harbors in Fort Belvoir, Virginia. Interested parties may present written views to the Board. Statements submitted should not repeat material previously presented at public meetings held by the District or Division Engineers, or contained in their reports, as this information is already available to the Board. Information submitted should be new, specific, and bear directly on the findings in the report.

Written communications should be mailed to the Board of Engineers for Rivers and Harbors, Kingman Building, Fort Belvoir, Virginia 22060, in time to reach the Board by 24 August 1981. If extension of this date is considered necessary, a written request stating reasons for additional time desired should be mailed to the Board as soon as possible after receipt of this notice. Information furnished by mail is considered just as carefully by the Board and carries the same weight as that furnished at public meetings.

Copies of information received by mail will not be furnished to other parties. However, such information will be regarded as public information (unless the correspondent requests otherwise) and may be inspected by other interested parties in the office of the Board.

The Board will not take final action on the report until after expiration of this notice, or any extension thereof that may be granted, and full consideration of all information submitted in response thereto. Should the Board contemplate action materially different from the recommendations of the Division Engineer, appropriate notice to that effect will be furnished to local interests directly concerned, inviting their views and comments prior to final action.

#### FURTHER INFORMATION

Further information may be obtained from this office or for information specific to the GREAT I Study, from the District Engineer, St. Paul, 1135 U. S. Post Office and Custom House, St. Paul, Minnesota 55101; or for information specific to the GREAT II Study, from the District Engineer, Rock Island, Clock Tower Building, Rock Island, Illinois 61201. Copies of the implementation reports are available, without cost, upon request to the District Engineer, St. Paul or Rock Island, until the limited supply is exhausted.

You are requested to give the foregoing information to any persons known by you to be interested in this report and who did not receive a copy of this public notice.

Thank you for your continued interest.

Sincerely,

  
SCOTT B. SMITH  
Brigadier General, USA  
Commander and Division Engineer

AGENCY REVIEW COMMENTS

IMPLEMENTATION REPORT FOR GREAT II STUDY  
UPPER MISSISSIPPI RIVER

APPENDIX A  
AGENCY REVIEW COMMENTS

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## MISSOURI DEPARTMENT OF CONSERVATION

MAILING ADDRESS:  
P.O. Box 180  
Jefferson City, Missouri 65102

STREET LOCATION:  
2901 North Ten Mile Drive  
Jefferson City, Missouri 65101

Telephone 314/751-4115  
LARRY R. GALE, Director

March 9, 1981

Colonel Frederick W. Mueller  
District Engineer  
Rock Island District, Corps of Engineers  
Clock Tower Building  
Rock Island, Illinois 61201

Re: NCRED-PB

Dear Colonel Mueller:

We have reviewed your draft "Implementation Report for GREAT II Study" dated February 1981. Our comments are aimed at strengthening parts of the report that relate to fish, wildlife and forest resources in our part of the Mississippi River. The numbers relate to the GREAT II Main Report recommendations.

1. Item 1b. While not a high priority item, it would, in our judgement, seem prudent to post locking information since many small boats do not have radios.
2. Item 2. We support your plans to provide additional information on navigation charts. If we can be of assistance, please contact my staff.
3. Item 6d. The concerns for fleeting area impacts lead us to believe that more data from both the industry regarding the need for and rationale used in selecting a particular site, as well as data from environmental interests regarding impacts they anticipate are necessary.
4. Item 7. As indicated above, data are needed to evaluate the impacts of fleeting.
5. Item 8. We compliment your district for its efforts on better management of dredged material. As the state agency charged with responsibility for fish and wildlife resources, we appreciate our involvement in the on-site inspection team.

### COMMISSION

W. ROBERT AYLWARD  
Kansas City

J. ERNEST DUNN, JR  
Kansas City

CARL DISALVO  
St. Louis

JACK WALLER  
Malden

Missouri Department Of Conservation

Colonel Frederick W. Mueller  
March 9, 1981  
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6. Item 8i. Most recommendations dealing with dredged material have a "High" priority. We believe this recommendation should be high.
7. Item 8 (Corps #31). If the studies are proposed in the Missouri reach, we would like to be involved.
8. Item 8 (Corps #34). We would hope that impacts on endangered species can be avoided, not merely minimized.
9. Item 8 (Corps #39). Based on our experience with dikes and revetments in over 1000 miles of major rivers, we would anticipate being deeply involved in any proposal to place or improve channel regulation structures in Missouri.
10. Item 16. Members of my staff have actively participated in the initial efforts of developing a Forest Management Plan for our river pools. We look forward to continued coordination of master plan efforts.
11. Item 36. When stream bank erosion is a severe problem, we recognize a need to protect the bank line. We would be concerned if a high percentage of natural bank habitat was replaced with rock.
12. Item 37. We believe this should be a high priority item since this effort would provide needed information for guiding corrective measures.
13. Item 41 (Corps #62). If sites in Missouri are selected, we would appreciate being involved.
14. Item 42. We would hope that this would receive higher priority.
15. Item 43. We compliment you and your staff for efforts relating to year around navigation. Will \$1 million be sufficient money to complete the effort?
16. Item 44. We and the Missouri Department of Natural Resources have a very active natural areas program and we would provide assistance when requested.

Missouri Department Of Conservation

Colonel Frederick W. Mueller  
March 9, 1981  
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17. Items 55 and 56. We hope that Rock Island District would take a more active role in efforts to improve the status of fish and wildlife in conjunction with the 9 foot channel of the Upper Mississippi River.

We appreciate the opportunity to offer these comments. If you or your staff have questions or desire more details, contact can be made with William H. Dieffenbach of my staff.

Sincerely,

*Larry R. Gale*  
LARRY R. GALE  
DIRECTOR

cc: Missouri Department of Natural Resources  
Attn: Mark Lastrup

JAY B. DILLINGHAM, *Chairman*  
Rm. 926, Livestock Exchange Bldg.  
1600 Congress  
Kansas City 64102

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Springfield 65804

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Suite 430  
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Kansas City 64153

March 12, 1981

TRANSPORTATION  
Waterways  
Draft Implementation Report for  
Great II Study - Comments

Richard J. Fleischman, P.E.  
U.S. Army Engineer District,  
Rock Island  
Clock Tower Building  
Rock Island, Illinois 61201

Dear Mr. Fleischman:

We have reviewed the above report and have the following comments to offer.

The implementation of a Resource Management Plan for the Great II reach of the Mississippi River will require continuing co-operation among all federal and state agencies. Therefore, the establishment of an Ongoing River Resource Management Team (ORRMT) can provide the opportunity for future cooperation.

We realize Corps implementation of many of the recommendations of the Great II Report will be affected by the availability of future funding. However, progress can be made and is being made on many of the recommendations, within current funding limits.

In summary, we feel the Corps Implementation Report fully addresses the recommendations of Great II.

Very truly yours,

*Robert N. Hunter*

Chief Engineer

MISSOURI  
HIGHWAY AND TRANSPORTATION COMMISSION



ROBERT N. HUNTER, *Chief Engineer*

BRUCE A. RING, *Chief Counsel*

L. V. MC LAUGHLIN, *Ass't. Chief Engineer*

MRS. IRENE WOLLENBERG, *Secretary*

P. O. Box 270  
Jefferson City, Missouri 65102  
Telephone (314) 751-2551



United States  
Department of  
Agriculture

Soil  
Conservation  
Service

4601 Hammersley Road  
Madison, Wisconsin 53711

March 17, 1981

Richard J. Fleischman, P.E.  
U.S. Army Engineer District  
Rock Island  
Clock Tower Building  
Rock Island, Illinois 61201

Dear Mr. Fleischman:

The following review comments pertain to the Implementation Report for  
GREAT II Study:

Section 2, Implementation Priorities, Page 2 - Should have a definition  
of "high", "medium", and "low" priority in terms of time increments; i.e.,  
high priority - implementation within the next five years (1981 - 1986), and  
so on.

RID Implementation Cost - tabular data - Each page should have a footnote  
stating cost was a 1980 or 1981 dollar value.

Sincerely,

*Robert N. Cheetham*  
Robert N. Cheetham, Jr.  
Geologist  
Member, Sediment and  
Erosion Control Work Group



The Soil Conservation Service  
is an agency of the  
Department of Agriculture

SCS-AS-1  
10-79



State of Wisconsin  
3911 Fish Hatchery Road  
Madison, Wisconsin 53711

DEPARTMENT OF NATURAL RESOURCES

Carroll D. Beaudry  
Secretary

March 18, 1981

Mr. Richard J. Fleischman, P.E.  
U. S. Army Engineer District - Rock Island  
Clock Tower Building  
Rock Island, Illinois 61201

Dear Mr. Fleischman:

RE: Corps Implementation Report for GREAT-II Study (Draft)

Thank you for the opportunity to comment on the RID CoE's draft GREAT-II Implementation Report. Now that GREAT-II study results have been completed, I look forward to implementing these recommendations which will improve management for the Upper Mississippi River. I also feel strongly that we must continue to coordinate these actions as in the cooperative GREAT framework in order to mutually agree on and support these implementation activities.

General and specific comments are provided for your consideration. If necessary, I or a representative of Wisconsin, would be willing to discuss these comments and others you may receive. This, in fact, would seem an appropriate subject for discussion at an initial meeting of the post-GREAT interagency coordination team (On-Going River Resource Management Team/ORRMT).

Sincerely,

*Douglas W. Morrissette*  
Douglas W. Morrissette  
District Director

*b/BS*

Enc.

cs

cc: Linda Bochert  
David Kennedy

GENERAL COMMENTS

1. The priorities assigned to recommendations must have been determined according to some level of rationale. It would seem that this justification must be presented if funding and authorizing levels (OCE, Congress, NCD, etc.) would be willing to provide the means for implementation. It would also seem appropriate that the ORRMT should be allowed to provide input on these priorities as the GREAT-II Team did not accomplish this ranking. Hopefully, through comments received, priorities can be mutually agreed on. This would seem consistent with GREAT's multiple use management approach rather than single goal/purpose management.

Priorities indicated in this report in some cases reflect the pre-GREAT attitude that the Corps will only be responsive to the needs of maintaining the navigation channel. Other concerns (GREAT identified recreation and fish and wildlife) must be given attention and receive support if the Corps intends to comply with GREAT-II products and the cooperation concept.

2. Justification. Page 3 indicates justification for obtaining means to implement a recommendation will be provided, if not already available in GREAT-II documents or this report. Certainly it would have been beneficial if the GREAT-II documents alone would suffice as justification. As stated, recommended pilot/demonstration programs must be conducted before the best methodology for implementing the Channel Maintenance Plan can be determined. On that basis, the demonstrations should be singled out for immediate funding so that the justification for implementing the Channel Maintenance Plan can be provided. It is also important that these pilot projects be coordinated through ORRMT.
3. Hopefully the identification of the present authority (if it exists) under which a recommendation can be implemented will expedite the appropriations process (and expedite the receipt of needed authority).
4. Corps recommendation summaries do not always reflect the meaning or intent of the Team approved wording. As a result, the program described for implementation would not achieve the solution to the problem the recommendation intends to resolve. See Specific Comments.
5. The Corps has neglected to propose action for Team approved implementation responsibilities such as OSIT participation, disposal site revegetation, urging Congress to recognize fish and wildlife and recreation as project purposes, etc. These items should be included (and perhaps others need to be identified) for Corps implementation action.
6. Action by the Chief of Engineers. Certainly it will be necessary for OCE to confirm/approve funding requests, but there are other actions requiring action by OCE. Most notable among these is policy change needed to acquire non-federal sites (or rights) for dredge material disposal.

GENERAL COMMENTS (continued)

2.

7. I agree that any funding obtained specifically earmarked for fish and wildlife and recreation should be separately budgeted to avoid transfer for dredging purposes.
8. I agree with the RID CoE position's endorsing the recommendations requiring Congressional action.
9. I compliment you for your position recommending that high priority programs be approved and funded for implementation with a target date of 1986 for full compliance.
10. As is being accomplished by the UMRBC in their CCJP report to WRC/Congress, it may be of benefit to try to consolidate CoE implementation efforts of GREAT-I and GREAT-II through NCD due to the closeness of report finalization dates and an increased likelihood of recognition if these efforts were consolidated.

SPECIFIC COMMENTS

Recommendation #1 -

Action #1 assumes structural modification of Lock and Dam #22 before studies are even conducted. This type of thinking has seriously jeopardized the credibility of the UMRBC Master Plan. I have no problem with investigation of structural integrity; river transportation congestion and alternative solutions; assessment of environmental, recreational, or transportational mode effects; or other such studies but such tunnel vision thinking in terms of replacement/major modification is totally irresponsible to a multi-purpose resource such as the Upper Mississippi River.

Action #3 does nothing to improve watercraft (both commercial and recreational) safety/congestion, a problem the Team saw needing resolution.

All action (#1-8) outlined for this recommendation tends to neglect Team intent to consider environmental and recreational effects of structural and non-structural measures.

Action #6 says that boat launch facilities can be built only with a cost sharing sponsor and such action is indicated as a low Corps priority, but Recommendation #56, which the Corps says it supports, asks Congress to allow Corps funding such projects without cost-sharing. What is the Corps position?

SPECIFIC COMMENTS (continued)

3.

Recommendation #4 -

Action #10 should be a high priority due to potential damage of barge spills.

Recommendation #8 -

Action #16 indicates Corps must still be shown the need for changing present day disposal activities and present equipment capability. The RID CoE 9-ft. channel EIS and the GREAT-II Channel Maintenance Plan indicates that present practices are causing unacceptable degradation and thus there is a need for increased capability. The question is not whether the sites should be used, but what is the most feasible method of complying with the designated primary sites. That's what the demonstration projects are for, not to pass judgment on the sites.

Action #17 should say that any disposal activities at these sites should be consistent with OSIT approved site plans.

Why is action #25 singled out as a medium priority? It should also be high, as all others are.

No mention is made of GREAT-II recommendations that the CoE mitigate, in cooperation with OSIT, all losses due to disposal of dredged material.

Action #27, does this mean for 1981 the RID Corps will use the GREAT-II definition rather than that of OCE?

Action #28 is excellent.

Action #29 should be an analysis which should be subject to the input of the ORRMT.

Action #30 should go further to say once the most feasible method (or mix of equipment) is determined, the RID will take appropriate action to secure the equipment needed for full compliance of the Channel Maintenance Plan primary sites by 1986. The cost for the equipment demonstration (\$8,000) is too low, is this a typo?

Action #31, #32, #33 should be coordinated with ORRMT. Will action #33 be done in 1981?

Action #34 is not intended to protect just endangered/threatened species, but also fragile wetlands, backwaters, and lowland habitats.

Action #35 is excellent and should set a goal of complete compliance with Channel Maintenance Plan primary sites by 1986.

SPECIFIC COMMENTS (continued)

4.

Action #37 should be completely funded by the Corps and should be a high priority. Until the model is developed, the RID should follow a reduced depth dredging program so that such data would be used in the modeling effort.

Action #38 calls for consideration of wing dam study information in any decision to modify/construct structures. It would appear appropriate to appropriate some dollars for actual construction work when this data and other parameters indicate such construction would be beneficial.

Action #39 will benefit one specific location (Hunt-Huff Island), but this action must be expanded to evaluate all recurrent dredge sites and take appropriate remedial action. This is what the recommendation calls for.

I agree with action #40, but believe it should be a high priority item because of the channel maintenance and habitat enhancement benefits that would result.

Action #41 is not acceptable, in terms of the recommendations paraphrase, of the action implied, and of the Corps interpretation that all problems have already been mitigated. The Side Channel Work Group has documented that extensive aquatic habitat adversely affected by impoundment (initially a benefit but ultimately resulting in detrimental ecological succession) could be mitigated by the recommended action. These effects are not solely the result of dredging activities, but nevertheless from the 9-ft. channel project. This should be a high priority item, and should call for restoration on a regular basis (such as one project annually) until all impacted areas have been rehabilitated.

Action #42 is not complete, as GREAT recommended that the RID CoE may (should) under certain hydraulic conditions, allow the channel to fall below 11 feet flat pool.

It's disturbing to see the RID CoE recommends action #43 as a high priority item for \$30,000,000 and not be interested (by virtue of low priority designation) in implementing action #41 which asks for mitigation of the 9-ft. project. Because no rationale has been provided for establishment of these priorities, I suggest all Corps implementation priorities be subjected to revision by the ORRMT before the GREAT-II or this Implementation Report is forwarded through the Corps chain of command.

GREAT-II's attempt to address a Commercial/Industrial/Utility Component was far less than comprehensive. Before the recommended studies are implemented they should be further examined and discussed by ORRMT.

Action #46 should be a high priority.

SPECIFIC COMMENTS (continued)

5.

Action #49 should be a high priority because the required authority change is a recommendation (56) of GREAT-II (which the Corps supports in this report). Other areas requiring access development should be identified and developed/maintained. This thought has been omitted from Corps implementation plans in action #49. This action should be a high priority.

Action #52 should be coordinated with states and FWS to assure coordinated policy for enforcement.

Action #54 misses the intent of the recommendation, which says to evaluate streambank erosion effect on dredging and, where problem areas are identified, propose and implement remedial action. If needed, authorization should be sought for implementation. This should be a high priority.

Action #55 should be a high priority.

Action #57 is fine, however even without additional funding specifically for this purpose the Corps should provide the required participation.

Action #58 should be a high priority.

Action #61 is excellent.

Action #62 should be a high priority.

Action #64 is excellent but should be a very high priority.

Actions #71 and #72 are excellent.

Action #73 should be a high priority.

Recommendations #55 and #56 should be fully supported by OCE to assure implementation.



## Department of Transportation

DIRECTOR'S OFFICE  
800 Lincoln Way, Ames, IA 50010  
515-296-1111  
REF NO 767  
March 19, 1981

Mr. Richard J. Fleischman, P.E.  
GREAT II RID Study Manager  
US Army Engineer District, Rock Island  
Clock Tower Building  
Rock Island, IL 61201

Dear Mr. Fleischman:

We have reviewed the "Implementation Report For GREAT II Study, Upper Mississippi River, February 1981." It is our understanding that the Rock Island District is considering implementing the GREAT II Channel Maintenance Plan to the extent possible within their existing expanded equipment capability. This involves using as many of GREAT II selected "primary" disposal sites as possible at an additional cost of \$700,000 per year.

After careful review of this issue and considering the low volumes of material dredged in the Rock Island District (266,000 cubic yards annually, 6-year average), the Iowa Department of Transportation finds it cannot support such a proposed program. The "primary" disposal sites were selected using environmental criteria only, and cost was not a consideration. Beneficial use of dredged material was a major criteria for disposal site selection, but as sand is cheap and plentiful in the area no real beneficial uses have been identified. In choosing these disposal sites the GREAT Team overlooked or voted down many closer and more cost-effective sites. However, dredged material is placed on less than one percent of the federally-owned land. Such placement does not destroy, but merely alters the land from an environmental standpoint. These tradeoffs are reasonable and necessary because of the multi-purpose nature of the navigation project.

Costs associated with the continued maintenance of all modes of transportation have been rising rapidly in recent years. The limited future monies available for maintenance of transportation systems will need to be spent wisely to meet the needs of commerce. Implementation of the GREAT II channel maintenance plan would have an adverse cost impact on transportation, while showing little positive benefit to fish and wildlife.

We understand that the On-Site Inspection Team concept will continue to be used in the Rock Island District. We support that concept and feel that most of the problems which brought about the need for GREAT have already been solved through this interdisciplinary management approach. We are also in full support of the Rock Island District's proposed demonstration program for riverine disposal.

### COMMISSIONERS

JULES M. BUBKER Sioux City	BARBARA DUNN Des Moines	C. ROGER FAIR Davenport	DONALD K. GARDNER Cedar Rapids	ROBERT R. HIGLER New Hampton	BRUCE H. VAN DRUFF Red Oak	DEL VAN HORN Jefferson
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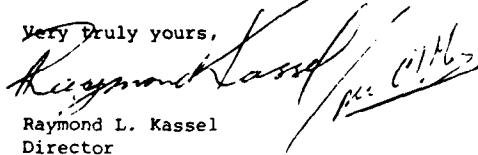
Mr. Richard J. Fleischman, P.E.  
Page Two  
March 19, 1981

Although many of the GREAT recommendations are supportable, we are opposed to recommendation no. 55 which recommends that Congress:

"Provide the Rock Island District Corps of Engineers with increased funding and authority associated with the Upper Mississippi River 9 foot navigation project to give equal consideration and to complete measures to benefit fish and wildlife and recreation resources. All measures carried out under this authority must be coordinated fully with and agreed to by all agencies having state and federal fish and wildlife resource management responsibilities in the affected area."

Also, the above recommendation was not supported by the State of Iowa through the Inter-Agency Resources Council. In addition, as the Administration has recommended significant increases in waterway user charges to cover the cost of navigation, it is appropriate to separately identify and directly fund other beneficial program efforts where appropriate.

Thank you for the opportunity to comment on this report.

Very truly yours,  
  
Raymond L. Kassel  
Director

RLK:JRH:kmr  
cc: Sam Tuthill  
Dor. Koch  
Larry Wilson



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
2701 Rockcreek Parkway, Suite 106  
North Kansas City, Missouri 64116

KANSAS CITY AREA OFFICE  
816/374-6166

ECOLOGICAL SERVICES  
816/374-5951

20 MAR 1981

Lt. Colonel Joseph F. Manzi Jr.  
Acting District Engineer  
U.S. Army Engineer District  
Rock Island  
Clock Tower Building  
Rock Island, Illinois 61201

Dear Lt. Colonel Manzi:

This is in reference to Col. Mueller's letter dated February 18, 1981 requesting our comments on the Corps Implementation Report for GREAT II Study. We have reviewed the report in association with the GREAT II Main Report and its supplements and have the following comments.

### General Comments

We appreciate the District's desire to produce a concise document to be used with the GREAT II Main Report. However, in the interest of brevity, the report has summarized some GREAT II recommendations so that the stated recommendations do not reflect the recommendations approved by the GREAT II Team. This summarization in turn causes some RID/COE actions to take on a different light which is not acceptable to the Fish and Wildlife Service. For instance, coordination with the Ongoing River Resource Management Team, the On Site Inspection Team, and/or the Fish and Wildlife Interagency Committee is not identified in all cases. The majority of our comments reflect this concern.

A second concern with the report is that rationale has not been included for priorities established or for their deviations from the Team approved recommendations. Without this type of information, it is difficult to understand why the District has chosen to give actions a low priority or to change the intent and direction of the GREAT II Team. Since the Rock Island District approved all the GREAT II recommendations as a Team member, we fail to understand reasons for unresponsive actions.

We are distressed that the District has chosen to drop the approved wording from Recommendations 55 and 56 pages 3-4. Recommendation 55 states that "all measures carried out under this authority must be coordinated fully with and agreed to by all agencies having state and federal fish and wildlife resource management responsibilities in the affected area (emphasis added)." Although the phrase is contained in Table 1, its omission from the text of the report

misrepresents the intent of the GREAT II recommendation. Many hours were spent by the Team working on the specific wording of this recommendation. The Corps must include the entire wording of the recommendation. Unless this is done, we would have to recommend that the recommendation be eliminated for implementation as the wording on page 4 is not acceptable to the Fish and Wildlife Service.

Approved wording has also been dropped from Recommendation 56. The Team agreed that this recommendation was to apply to COE general plan lands not under cooperative agreement with the Fish and Wildlife Service or state management agencies. With this definition in mind, the words "general plan" were substituted for "managed." The Corps must make this distinction so that the FWS retains primary recreation management authority as per the Upper Mississippi Refuge Act and Refuge Recreation Act on all refuge lands including those under cooperative agreement.

Finally, we believe that the Corps must reevaluate Action #41 (see specific comments). The program described in the report is inadequate and unacceptable. Considerable effort went into developing this recommendation and is necessary for the overall benefit of fish and wildlife resources. Again, we would like to point out that the District approved this recommendation as a Team member, but the recommended program falls far short of actually implementing this recommendation.

#### Specific Comments and Recommended Changes

Main Report #	COE Action #
---------------	--------------

1	1	Comment: This program should be fully coordinated with federal and state conservation agencies. The FWIC could lead this coordination.  Change: Revise RID program to incorporate above.
1	3	Comment: The intent of the recommendation was to ease the conflicts between commercial navigation and recreational boaters. In essence, the program suggested by RID is the no action alternative considered by the CTWG, PFWG and the GREAT II Team and found unacceptable.  Change: Revise RID program to meet the intent of the recommendation.
1	5-8	Comment: This recommendation also calls for special consideration to be given to the historical significance of each structure and providing for mitigation of fish and wildlife impacts and the needs of recreation.  Change: Incorporate above into stated recommendation and RID program.
2	9	Comment: The recommendation also calls for clearly identifying federal refuges on navigation charts and to develop individual pool navigation charts for recreational boaters.

Change: Incorporate above into stated recommendation and RID program.

4 10 Comments: Safety items should be of high priority. Hazardous situations need to be rectified as soon as possible to minimize the potential for catastrophic spills.

Change: Upgrade priority from low to high.

7 15 Comment: RID program does not meet the intent of the recommendation of RID assessing the environmental and economic impacts of barge fleeting on the UMR. Since little is known of the impacts of this activity and fleeting appears to be increasing yearly, this program should have a high priority.

Change: Revise program to show that RID will take a leadership role in accomplishing these studies. Upgrade priority.

8 16 Comment: "Whose need is proved" is a poor choice of words.

Change: Substitute in phrase "that have been shown to be feasible and practicable".

8 17 Comment: Preliminary disposal site plans must also include mitigation requirements as stated in the recommendation. Although the content of the site plans may be reviewed by the ORRMT, the RID is responsible for completion of all disposal site plans in coordination with OSIT.

Change: Incorporate above into stated recommendation and RID program.

8 25 Comment: Monitoring of sites is necessary to establish mitigation requirement and should have as high a priority as other actions under this recommendation.

Change: Upgrade priority from medium to high.

8 17-26 Comment: This group of recommendations should also include mitigation of all dredged disposal impacts and monitoring of mitigation measures. (See Channel Maintenance Handbook page 22)

Change: Develop an RID program for this recommendation.

8 27 Comment: As we understand it, RID is not currently working under the GREAT II definition for emergency dredging but is using the one outlined in the authority column. In addition, the recommendation calls for the selection of a disposal site in accordance with the procedures established in the Channel Maintenance Handbook.

Change: Incorporate above into stated recommendation, RID program and authority.

8 31 Comment: Tracing of dredged material will require a detailed plan-of-action and extensive coordination with FWIC.  
Change: Incorporate above into RID program.

8 32 Comment: This program should be coordinated with OSIT.  
Change: Incorporate above into RID program.

8 33 Comment: See action #31  
Change: Add this program to plan-of-action for #31.

8 34 Comment: We believe the intent of the team was to include wetlands and other unique habitat as sensitive areas in addition to habitat for federal or state endangered and threatened species. In addition, the program as described must include consultation under the Endangered Species Act, of 1973 as amended, or state law, as appropriate.  
Change: Incorporate wetlands and endangered species consultation into the program.

8 36-40 Comment: This recommendation also includes the OSIT chairman as a member of CARS.  
Change: Incorporate above into stated recommendation and program of RID.

8 37 Comment: RID should make a commitment to model development. A sound analysis method is necessary to evaluate and potentially reduce recurrent dredge sites. It is unlikely that other "institutions" will be able to complete their work without COE funding support.  
Change: Incorporate above into RID program.

8 39 Comment: The RID program needs to address proposed future actions on this recommendation. A commitment to the recommendation associated with Action #37 would aid in completion of this recommendation.  
Change: Develop long-term plan for evaluation of recurrent dredge sites to determine if regulatory structures could reduce dredging.

8 40 Comment: See Action #39  
Change: See Action #39

8 41 Comment: The intent of this recommendation will not be carried out by the RID program. The recommendation applies to more than dredging activities. It also includes mitigation of impacts from lock and dam construction and wing and closing dam construction. Mitigation measures may include notching of wing and closing structures, placing culverts in fixed portions of the navigation dams, and removing dredged material from side channels and backwaters.

We are aware of only one dredging-impacted backwater which the RID has corrected - RM 582, Steamboat Slough. Further, environmental benefits of such alterations should not be considered minor since the problems listed by the SCWG cumulatively comprise 2600 acres of affected habitat.

Change: Incorporate above into the stated recommendation and the RID program and include coordination with the FWIC

8 42 Comment: The stated recommendation is not accurate.

Change: Add: "Under certain hydraulic conditions, the RID/COE may allow the channel to fall below 11-feet flat pool."

8 - Comment: Two actions to be implemented by RID and contained in the Channel Maintenance Handbook have been omitted. These are:

1. RID participation in the OSIT as a voting member and providing technical data (pages 9-10).
2. RID commitment to revegetation of dredged material experiments (pages 17-18).

Change: Add above to action items under Recommendation 8.

13 47 Comment: We support the RID/COE policy.

Change: None

14 - Comment: The recommendation calls for the COE to assist in coordination of user survey information.

Change: Incorporate above into RID program.

17 49 Comment: The main intent of this recommendation is to coordinate and implement plans for recreational access development consistent with single-use and multiple-use values. Pool 19 is to have highest priority. We also believe that this recommendation should have at least a medium priority.

Change: Incorporate above into stated recommendation and RID program. Upgrade priority.

18 50 Comment: We question the RID Implementation cost.

Change: As appropriate.

36 54 Comment: The intent of this recommendation was for the RID to determine the contribution of streambank erosion to channel maintenance dredging and damage to recreational and cultural resource sites. Once this has been determined, we agree that potential solutions need to be evaluated on a case-by-case basis. An overall study is necessary to pinpoint problem areas.

It was our understanding at the Team that no special authorization is necessary for the intended recommendation since it was associated with channel maintenance.

Change: Incorporate above into stated recommendation and RID program and authorization.

37 55 Comment: This action should be coordinated with FWIC and OSIT to establish a plan-of-action. Since backwaters are being lost at an alarming rate, this action should be of high priority.

Change: Incorporate above into the RID program. Upgrade its priority to high.

41 - Comment: All actions taken under this recommendation must be fully coordinated with FWIC.

Change: Incorporate above into RID program.

41 58 Comment: This program should be high priority once funding and authorization is obtained under Recommendation 55.

Change: Upgrade priority to high.

41 59 Comment: This evaluation should be coordinated with the FWIC.

Change: Incorporate above into RID program.

41 60 Comment: This program should be expanded to include use of silt from backwater if it is shown to be feasible to meet intent of the Team.

Change: Incorporate above into RID program.

41 61 Comment: We commend the RID's program for this recommendation and look forward to working with you.

Change: None

41 62 Comment: The final part of this recommendation includes the RID initiating a research and development program to determine the equipment necessary to perform large scale backwater alterations.

Change: Incorporate above into stated recommendation and and RID program.

42 63 Comment: The program described here is similiar, in part, to Recommendation 54. This matrix system and pilot project should be coordinated with FWIC and approved by ORRMT before implementation.

Change: Incorporate above into RID program.

43 64 Comment: This study is imperative to our understanding of potential impacts of winter navigation and should have high priority. In addition, the FWMWG estimated \$1,810,000 to accomplish the necessary studies.

Changed: Upgrade priority and include FWMWG study costs.

55&56 - Comment: What steps will the COE be taking to see that these recommendations are authorized by Congress?

Change: Establish a RID program for these recommendations.

56 - Comment: The stated recommendation does not reflect final team wording. The Team agreed that this recommendation was to apply to COE general plan lands not under cooperative agreement with the FWS or State management agencies.

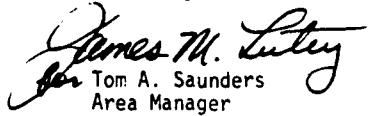
Change: Insert "general plan" for "managed".  
The RID program should state that authority will only be sought for those lands not under cooperative agreement with the FWS or State management agencies.

#### Summary

The Fish and Wildlife Service believes that the Rock Island District has taken a positive step forward in preparation of this implementation report. However, due to the comments outlined above, we are hesitant about giving our full support to this report. We believe that these problems are not insurmountable, but with continued coordination they can be satisfactorily resolved. We appreciate the opportunity to comment on this document and look forward to our continued cooperation in implementing the recommendations of the GREAT II Team.

These comments have been prepared under the authority of and in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as

amended; 16 U.S.C. 661 et seq.).

Sincerely,  
  
Tom A. Saunders  
Area Manager

cc: GREAT II Team

Iowa

a place to grow

IOWA DEVELOPMENT COMMISSION  
250 Jewett Building-Des Moines, Iowa 50309  
Phone: (515) 281-3251 Telex: 478-466 IA DEV COM DMS

March 20, 1981

Colonel F. W. Mueller, Jr.  
District Engineer  
U. S. Army Corps of Engineers  
Rock Island District  
Clock Tower Building  
Rock Island, Illinois 61201

Dear Colonel Mueller:

The Iowa Development Commission has consistently pursued a multi-use approach to the Mississippi River. However, we fear a delusion of transportation resources by the U.S. Corps of Engineers if Congress authorizes multi-project purposes for the Corps on the Upper Mississippi River. In light of the current restructuring of midwestern railroads, water transportation represents a vital concern to our state's industrial and agricultural economy.

I direct your attention to Section 3, entitled, Implementation Recommendations. The paragraph entitled Authorization indicates that Congress should be asked to increase the U.S. Army Corps of Engineers' authority to give, "equal consideration to complete measures to benefit fish and wildlife and recreational resources."

The Iowa Development Commission asks that the Corps of Engineers carefully reconsiders this recommendation. If the Corps of Engineers' authority were expanded, we feel the transportation, operating and maintenance budgets, and the channel maintenance program could suffer.

Thank you for this opportunity to comment on the Great II Implementation Study.

Sincerely,



William J. Bestmann  
Director

WJB:ckc

Robert D. Ray Governor William J. Bestmann Director

William H. Burger Chairman E. Thurman Gassill Vice Chairman Donna Keppel Secretary Steve Chapman Hugh D. Clark Robert H. Meier  
Mardelle Noble F. Forbes Olberg Bill Riney Ronald Schaeftman Gerald L. Werner



COMMANDER  
SECOND COAST GUARD DISTRICT  
ST. LOUIS, MISSOURI 63103

24 March 1981

Lieutenant Colonel Joseph F. Manzi  
District Engineer, Rock Island District  
Clock Tower Building  
Rock Island, Illinois 61201

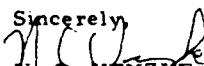
Dear Colonel Manzi:

Thank you for the opportunity to review and comment on the Implementation Report for GREAT II.

The Rock Island District has assigned implementation costs to applicable recommendations. Of particular concern is the amount listed for implementing the channel maintenance plan. The contents of that plan, with its associated cost increases, appear to have disproportionate benefits for interests other than commercial navigation. While we support the expenditure of funds for other necessary purposes, we must call for the proper identification of cost and project beneficiaries in Congressional budget requests. It is believed more appropriate that the \$700,000 should appear as a separate line item in the Corps budget request. This would be in keeping with the GREAT II Team recommendation for cost allocation for all user/beneficiaries. This philosophy also has strong DOT and administration support.

It is disappointing that construction of a mooring cell just north of Lock 22 has been given a low priority. This appears to be based on the fact that a system wide study of mooring requirements for the Upper Mississippi River is currently underway. However, it is felt that this project has been identified by a study analysis of the area as a necessary safety as well as an economic improvement. Therefore, the project should not be delayed as a result of the mooring study. It is urged that the priority be raised to high, and the project be actively supported by the Rock Island District.

I'd be glad to provide any additional assistance in this vital matter. Please feel free to call me or my staff at any time.

Sincerely,  
  
N. C. VENZKE  
Rear Admiral, U. S. Coast Guard

COMMISSIONERS  
MARIAN RIEE Chairman - Whiting  
CAROLYN T WALTER Vice-Chairman - Des Moines  
THOMAS A BATES - Bettendorf  
JOHN C BROPHY - Lansing  
JOHN D FIELD - Hamburg  
RICHARD W KEMLER - Marshalltown  
DONALD E KNUDSEN - Eagle Grove



Larry J. Wilson, Director  
Wallace State Office Building, Des Moines, Iowa 50319  
515/281-5145

An EQUAL OPPORTUNITY Agency

March 27, 1981

Joseph F. Manzi, Jr.  
Lt. Colonel  
Acting District Engineer  
U.S. Army Engineer District  
Rock Island  
Clock Tower Building  
Rock Island, Illinois 61201

Dear Lt. Colonel Manzi:

We appreciate the opportunity to review the District Engineer's Implementation Report for GREAT II. Generally speaking, the Iowa Conservation Commission endorses the District Engineer's proposed actions to implement the GREAT II recommendations. Coupled with an effective, on-going communication/coordination effort such as that potentially available through the "On-Going River Resource Management Team", the proposed actions offer real hope for achieving a significant portion of the river system management strategy originally spelled out as a goal of GREAT. Iowa has been and will continue to be a committed participant in multi-disciplinary resource planning and management for the Mississippi River.

It has been brought to our attention that there is some unrest among GREAT II Team Members in regard to consolidations of Team-approved recommendations to the point where there is a perceived change in meaning. In order to assure a positive and progressive atmosphere at this rather crucial juncture in GREAT-related endeavors, I would urge you to modify the Implementation report to the extent that each recommendation is quoted in its entirety.

Having co-chaired the GREAT II effort, no one or agency is any more aware than the RID/COE of the careful and thoughtful efforts to develop recommendations capable of securing Team consensus. At the same time, we can appreciate your agency's need to develop a response that truly reflects your position.

It therefore seems apparent to us that the District Engineer's report should convey each recommendation as it was adopted, with the response, priority, justification statements, etc. clearly representing the RID/COE's position. It is our feeling that this type of forthright approach will alleviate some of the misgivings which might otherwise develop.

Again, thank you for the opportunity to review and comment on the draft report.

Sincerely,



LARRY S. WILSON, DIRECTOR  
IOWA CONSERVATION COMMISSION

LJW/s/cje

cc: Richard Fleischman  
Sam Tuthill  
Don Koch  
Raymond Kassel

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426

IN REPLY REFER TO:

OEPR-DHRA  
Federal Project Review  
Implementation Report  
Great II Study, Upper  
Mississippi River

Colonel F. W. Mueller, Jr.  
District Engineer  
Rock Island District, Corps of Engineers  
Clock Tower Building  
Rock Island, Illinois 61201

APR 2 1981

Attention: NCRED-PB

Dear Colonel Mueller:

This is in response to your letter of February 18, 1981, requesting our review and comments on the draft Implementation Report for Great II Study, Upper Mississippi River from Guttenberg, Iowa to Saverton, Missouri.

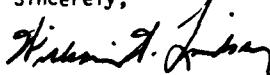
The Great II Study Report is an interagency, state and public cooperation report which contains recommended policies and actions for the future management of water and related land resources of the Mississippi River from Guttenberg, Iowa to Saverton, Missouri. This implementation report provides programs by which the Rock Island District can carry out recommended Great II actions in those areas where the Corps of Engineers has authority and responsibility to manage the river resources. The authority for the Great II Study Report and this implementation report is contained in section 117 of the Water Resources Development Act of 1976 (Public Law 94-587).

According to the implementation report, studies are underway by the Rock Island District to determine the hydropower potential within the Great II area. The implementation report also mentions that non-Federal interests have applied for Federal Energy Regulatory Commission permits to study the feasibility of hydropower development at Federal lock and dam structures.

-2-

The attached table summarizes the FERC preliminary permit data for proposed hydroelectric power projects utilizing existing Federal locks and dams on the Mississippi River between Guttenberg, Iowa and Saverton, Missouri. If you need additional information concerning these FERC preliminary permits, coordination should be made with Mr. Lawrence F. Coffill, Regional Engineer, Federal Energy Regulatory Commission, 31st Floor, Federal Building, 230 South Dearborn Street, Chicago, Illinois 60604. His telephone number is FTS8-353-6173.

Sincerely,



William W. Lindsay, Director  
Office of Electric Power Regulation

Attachment

ATTACHMENT

FERC Preliminary Permits for Proposed Hydroelectric Projects  
on Mississippi River Locks and Dams  
From Guttenberg, Iowa to Saverton, Missouri

<u>FERC Project No.</u>	<u>Project Name</u>	<u>Permittee or Applicant</u>	<u>Preliminary Permit Status</u>	<u>Potential Capacity (Megawatts)</u>
3196	Mississippi River L&D 13	Eastern Iowa Light & Power Cooperative	Outstanding	17.5
3197	Mississippi River L&D 17	Eastern Iowa Light & Power Cooperative	Outstanding	10.5
3198	Mississippi River L&D 18	Eastern Iowa Light & Power Cooperative	Outstanding	14
3199	Mississippi River L&D 16	Eastern Iowa Light & Power Cooperative	Outstanding	14
3241	Mississippi River L&D 20	Missouri Joint Municipal Electric Utility Commission	Outstanding	25
3242	Mississippi River L&D 21	Missouri Joint Municipal Electric Utility Commission	Outstanding	25
3243	Mississippi River L&D 22	Missouri Joint Municipal Electric Utility Commission	Outstanding	25
3597	Mississippi L&D No.14	Mitchell Energy Company, Inc.	Pending	23
3630	Mississippi L&D No.12	City of Bellevue, Iowa	Pending	19.25
3668	Mississippi L&D No.11	Mitchell Energy Company, Inc.	Pending	10
3670	Mississippi L&D No. 12	Mitchell Energy Company, Inc.	Pending	14
3751	Mississippi L&D No.10	City of Guttenberg, Iowa	Pending	8.2
3862	Mississippi L&D No.14	City of Le Claire, Iowa	Pending	25
4154	Mississippi L&D No.11	Cities of Bellevue, Preston & Sabula, Iowa	Pending	24

**RID RESPONSES TO REVIEW COMMENTS**

A  
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X  
B

IMPLEMENTATION REPORT FOR GREAT II STUDY  
UPPER MISSISSIPPI RIVER

APPENDIX B

RID RESPONSES TO REVIEW COMMENTS

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REPLY TO  
ATTENTION OF:  
NCRED-PB

DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61201

22 MAY 1981

Mr. Larry R. Gale, Director  
Missouri Department of Conservation  
P.O. Box 180  
Jefferson City, Missouri 65102

Dear Mr. Gale:

I appreciate your review comments on the Draft Implementation Report for the GREAT II Study and intend to incorporate appropriate review comments from your agency to help strengthen our final report. The Final Implementation Report is scheduled to be distributed in June 1981 along with the North Central Division Engineer's Public Notice. Due to the closeness of report finalization dates for the GREAT I and II Implementation Reports, the Public Notice will cover both GREAT I and GREAT II.

In regard to your specific comments, I am making the following responses corresponding to your numbered items.

1. The Rock Island District does not feel the conflicts between commercial navigation and recreational boaters is exceptional. The District would be willing to conduct a survey at one lock if this action was initiated through River Resources Coordinating Team (RRCT), formerly the Ongoing River Resource Management Team (ORRMT).
2. Noted.
3. Noted.
4. The Rock Island District will cooperate in the collection of data needed to evaluate the impacts of fleeting.
5. Noted.
6. Implementation priority will remain Medium since monitoring of sites will be contingent on availability of funds.
7. Noted.
8. Noted.

NCRED-PB  
Mr. Larry R. Gale

22 MAR 1981

9. Noted.

10. Noted.

11. Noted.

12. The implementation priority for Recommendation 37 has been changed from Medium to High.

13. Noted.

14. Implementation priority will remain Low.

15. The Rock Island District has recommended that they initiate an environmental study effort with a "minimum" of 5 years with a funding level of approximately \$200,000 each year.

16. Noted.

17. The Rock Island District has endorsed Recommendations 55 and 56, but the District is not the appropriate level to seek implementation of these recommendations. Recommendations for policy changes of this type will be considered in the preparation of the North Central Division's submission to the Army Civil Works Legislative Program.

Of the 69 recommended Rock Island District actions in the Draft Implementation Report, 36 are in the High implementation priority category. The Rock Island District has recommended that these High prioritized programs be approved and funded on an orderly basis to provide full implementation by 1986. It is my belief that this positive approach is a tremendous step forward in the implementation of GREAT II recommendations.

Sincerely,

  
JOSEPH F. MANZI, Jr.  
LTC, Corps of Engineers  
Acting District Engineer

Copy Furnished:  
Mr. Mark Lastrup  
Missouri Department of Natural Resources  
P.O. Box 1368  
Jefferson City, Missouri 65101



DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61201

REPLY TO  
ATTENTION OF:

NCRED-PB

22 MAY 1981

Mr. Robert N. Hunter, Chief Engineer  
Missouri Highway and Transportation  
Commission  
P.O. Box 270  
Jefferson City, Missouri 65102

Dear Mr. Hunter:

Thank you for taking the time to review and comment on the Rock Island District's Draft Implementation Report for the GREAT II Study.

I agree that the establishment of an Ongoing River Resources Management Team (ORRMT) can provide the opportunity for future cooperation among Federal and state agencies on river resource management issues. To this end, I have appointed a representative from our Operations Division to actively co-chair, with the State of Iowa, the ORRMT. The first meeting of the ORRMT was held on 18 May 1981. At that meeting, the name was changed to the River Resources Coordinating Team (RRCT).

The Final Implementation Report for the GREAT II Study is scheduled to be distributed in June 1981 along with the North Central Division Engineer's Public Notice. Due to the closeness of report finalization dates for the GREAT I and II Implementation Reports, the Public Notice will cover both GREAT I and GREAT II.

Sincerely,

JOSEPH F. MANZI, Jr.  
LTC, Corps of Engineers  
Acting District Engineer

Copy Furnished:  
Mr. Mark Lastrup  
Missouri Department of Natural  
Resources  
P.O. Box 1368  
Jefferson City, Missouri 65101



DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61201

REPLY TO  
ATTENTION OF:

NCRED-PB

22 MAY 1981

Mr. Robert N. Cheetham, Jr.  
US Department of Agriculture  
Soil Conservation Service  
4601 Hammersley Road  
Madison, Wisconsin 53711

Dear Mr. Cheetham:

I appreciate your review comments on the Draft Implementation Report for the GREAT II Study. The Final Implementation Report is scheduled to be distributed in June 1981 along with the North Central Division Engineer's Public Notice. Due to the closeness of report finalization dates for the GREAT I and II Implementation Reports, the Public Notice will cover both GREAT I and GREAT II.

Insofar as your specific comments, the Rock Island District does not feel they can schedule Medium and Low priority items at this time. The Rock Island District has recommended that the High prioritized programs, 36 of a total of 69 that the Rock Island District has lead agency responsibility for implementing, be approved and funded on an orderly basis to provide full implementation by 1986. It is my belief that this positive approach is a tremendous step forward in the implementation of GREAT II recommendations.

It should be clear from the Draft Implementation Report date (February 1981) that the costs are 1981 and, therefore, each page does not have to be footnoted stating that the costs are 1981 dollar values.

Sincerely,

JOSEPH F. MANZI, Jr.  
LTC, Corps of Engineers  
Acting District Engineer



DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61201

REPLY TO  
ATTENTION OF:

NCRED-PB

22 MAY 1981

Mr. Douglas W. Morrissette  
District Director  
State of Wisconsin  
Department of Natural Resources  
3911 Fish Hatchery Road  
Madison, Wisconsin 53711

Dear Mr. Morrissette:

Thank you for taking the time to review and comment on the Rock Island District's Draft Implementation Report for the GREAT II Study. I intend to incorporate appropriate review comments from your agency to help strengthen our final report.

In regard to your general comments, I am making the following responses:

1. Emphasis of the GREAT II Team was placed on Channel Maintenance and Coordination activities. Of the 69 recommended Rock Island District actions in the Draft Implementation Report, 28 are in the Channel Maintenance area and 3 are in the Coordination area. Of these 31 actions, 26 are High priority items. Subject to the availability of funds, it is the District's intention to implement all High priority items within a 5-year time frame or by FY 86. I believe this is a tremendous step forward in the implementation of GREAT II recommendations.
2. Noted. Channel Maintenance recommended pilot/demonstration programs are in the High implementation priority category.
3. Noted.
4. The intent of the Draft Implementation Report was not to reproduce GREAT II products but rather to summarize GREAT II recommendations that the Corps, in particular the Rock Island District, was identified as having lead agency responsibility for implementation. With this in mind, the final document will be modified to reflect GREAT II wording where applicable.
5. On-site Inspection Team participation and disposal site revegetation have been incorporated into the final report. The Rock Island District has endorsed the recommendation calling for Congress to increase the US Army Corps of Engineers funding and authority to give equal consideration to complete

NCRED-PB  
Mr. Douglas W. Morrissette

22 MAY 1981

measures to benefit fish and wildlife and recreation resources. The District is not, however, the appropriate level to seek implementation of this recommendation. Recommendations for policy changes of this type will be considered in the preparation of the North Central Division's submission to the Army Civil Works Legislative Program.

6. The Corps has the authority to purchase rights or land for the placement of dredged material.

7. Noted.

8. Noted.

9. Noted.

10. The Final Implementation Report for the GREAT II Study is scheduled to be distributed in June 1981 along with the North Central Division Engineer's Public Notice. Due to the closeness of report finalization dates for the GREAT I and II Implementation Reports, the Public Notice will cover both GREAT I and GREAT II.

Responses to your specific comments are keyed to the Corps of Engineers recommended action numbers and are as follows:

1. This action item does "not" assume structural modification. Studies will be conducted to determine best overall solution.

3. The Rock Island District does not feel the conflicts between commercial navigation and recreational boaters is exceptional. The District would be willing to conduct a survey at one lock if this action was initiated through the River Resources Coordinating Team (RRCT), formerly the Ongoing River Resource Management Team (ORRMT).

1-8. Consideration of environmental and recreational effects applies to structural measures (Items 5-8). These considerations will be addressed through the RRCT in developing plans for structural measures.

6. Comment is confusing. Present legislation requires a cost-sharing sponsor.

10. Priority unchanged; remains Low.

16. If riverine disposal is shown to be an acceptable practice, designated primary sites could change. Thus, there is a question as to whether the sites should be used.

17. Coordination comment.

25. Priority unchanged; remains Medium. Monitoring of disposal sites to document the impact on fish and wildlife resources will be contingent on availability of funds.

NCRED-PB  
Mr. Douglas W. Morrissette

22 MAY 1981

Unnumbered. Mitigation program incorporated into final report.

27. Program changed to read "The Rock Island District supports the recommended wording and is currently providing the required information in agreement with Section 404(t), Clean Water Act of 1977."

28. Noted.

29. Coordination comment.

30. The Rock Island District implementation cost of \$8,000 is only to evaluate the St. Paul District's mechanical equipment contracting efforts. Action item 16 covers the action the District intends to take to allow disposal in primary sites.

31, 32, and 33. Coordination comment. Investigation called for in action item 33 will be done in the High priority time frame; not necessarily in 1981.

34. Program changed to include "fragile wetlands, backwaters, and lowland habitats."

35. Noted.

37. The Rock Island District does not plan to make a commitment to model development. Program outline is intended to be a positive approach as to what the Rock Island District can do.

38. As program indicates, study results of the GREAT II Wing Dam Classification Study and the Wing Dam Notching Study will be included in any "decision" to repair, alter, or construct training or revetment structures. Money for actual construction work is included in action item 40.

39. Concerns are addressed in action item 40.

40. Priority unchanged; remains Medium.

41. Wording of recommendation and implementation program changed in the final report.

42. Added "Under certain hydraulic conditions, the Rock Island District may allow the channel to fall below 11 feet flat pool" to recommendation.

Unnumbered. (Recommendation 9) Coordination comment.

46. Priority unchanged; remains Low.

49. The only action item specified for the Rock Island District in the GREAT II Main Report is at L/D #11. Priority unchanged; remains Low.

NCBED-PB  
Mr. Douglas W. Morrissette

22 MAY 1981

52. Coordination comment.

54. No change to program. The Rock Island District does not acknowledge a cause and effect relationship between bank erosion and dredging.

55. Priority changed from Medium to High.

57. Noted.

58. Priority unchanged; remains Medium.

61. Noted.

62. Priority unchanged; remains Medium.

64. Priority unchanged; remains Medium.

70. Noted.

71. Noted.

73. Priority unchanged; remains Low.

Unnumbered. (Recommendations 55 and 56) Noted. The Draft Implementation Report only covers Rock Island District actions.

Throughout the GREAT II Study, the Rock Island District's voting member attempted to play a positive role during the formulation of recommendations and did not vote against any recommendations where we could, in good faith, take some positive action for implementation. This philosophy was carried over to the programs listed in the Implementation Report. We feel we have prepared an action program which sets priorities and gives an outline of our implementation plans consistent with our obligations and financial restraints.

Sincerely,



JOSEPH F. MANZI, Jr.  
LTC, Corps of Engineers  
Acting District Engineer

Copy Furnished:  
Dr. David Kennedy  
Wisconsin Department of Natural  
Resources  
State Office Building  
3550 Mormon Coulee Road  
LaCrosse, Wisconsin 54601



DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61201

REPLY TO  
ATTENTION OF:

NCRED-PB

22 MAY 1981

Mr. Raymond L. Kassel, Director  
Department of Transportation  
800 Lincoln Way  
Ames, Iowa 50010

Dear Mr. Kassel:

Thank you for taking the time to review and comment on the Rock Island District's Draft Implementation Report for the GREAT II Study.

The \$700,000 per year cost for implementing the Channel Maintenance Plan is mainly associated with state requirements which are predominantly environmental concerns.

Your opposition to Recommendation 55 calling for Congress to increase the US Army Corps of Engineers' authority to give "equal consideration to complete measures to benefit fish and wildlife and recreational resources" is noted. This recommendation is a GREAT II, and not a Corps of Engineers, recommendation. During the course of the GREAT II Study, the Rock Island District's voting member attempted to play a positive conciliatory role during the formulation of recommendations. The Rock Island District has endorsed this recommendation but the District is not the appropriate level to seek implementation of this recommendation. Recommendations for policy changes of this type will be considered in the preparation of the North Central Division submission to the Army Civil Works Legislative Program.

The Final Implementation Report for the GREAT II Study is scheduled to be distributed in June 1981 along with the North Central Division Engineer's Public Notice. Due to the closeness of report finalization dates for the GREAT I and II Implementation Reports, the Public Notice will cover both GREAT I and GREAT II.

Sincerely,

JOSEPH F. MANZI, Jr.  
LTC, Corps of Engineers  
Acting District Engineer

Copy Furnished:  
Mr. Kevin Szcodronski  
Iowa Conservation Commission  
Wallace State Office Building  
Des Moines, Iowa 50319



DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61201

REPLY TO  
ATTENTION OF:

NCRED-PB

22 MAY 1981

Mr. Tom A. Saunders, Area Manager  
US Department of the Interior  
Fish and Wildlife Service  
2701 Rockcreek Parkway, Suite 106  
North Kansas City, Missouri 64116

Dear Mr. Saunders:

I appreciate your review comments on the Draft Implementation Report for the GREAT II Study and intend to incorporate appropriate review comments from your agency to help strengthen our final report. The Final Implementation Report is scheduled to be distributed in June 1981 along with the North Central Division Engineer's Public Notice. Due to the closeness of report finalization dates for the GREAT I and II Implementation Reports, the Public Notice will cover both GREAT I and GREAT II.

The intent of the Draft Implementation Report was not to reproduce GREAT II products but rather to summarize GREAT II recommendations that the Corps, in particular the Rock Island District, was identified as having lead agency responsibility for implementation. With this in mind, the final document will be modified to reflect GREAT II wording where applicable. Insofar as coordination is concerned, the Rock Island District programs do not specifically address coordination because it is our belief that coordination will be accomplished through the River Resources Coordinating Team (RRCT), formerly the Ongoing River Resource Management Team (ORRMT), and, therefore, would be redundant to spell out in the various implementation programs.

Emphasis of the GREAT II Team was placed on Channel Maintenance and Coordination activities. Of the 69 recommended Rock Island District actions in the Draft Implementation Report, 28 are in the Channel Maintenance area and 3 are in the Coordination area. Of these 31 actions, 26 are High priority items. Subject to the availability of funds, it is the District's intention to implement all High priority items within a 5-year time frame or by FY 86. I believe this is a tremendous step forward in the implementation of GREAT II recommendations.

Throughout the GREAT II Study, the Rock Island District's voting member attempted to play a positive role during the formulation of recommendations and did not vote against any recommendations where we could, in good faith, take some positive action for implementation. This philosophy was carried over to

NCRED-PB  
Mr. Tom A. Saunders

22 MAY 1981

the programs listed in the Implementation Report. We feel we have prepared an action program which sets priorities and gives an outline of our implementation plans consistent with our obligations and financial restraints.

Recommendations 55 and 56 have been reworded to reflect GREAT II approved wording.

In regard to your specific comments, I am making the following responses corresponding to the Corps of Engineers recommended action numbers:

1. No change to program; coordination to be obtained through the RRCT.
3. The Rock Island District does not feel the conflicts between commercial navigation and recreational boaters is exceptional. The District would be willing to conduct a survey at one lock if this action was initiated through the RRCT.
- 5-8. In developing plans for structural measures, the special consideration to be given to the historical significance of each structure and providing for mitigation of fish and wildlife impacts and the needs of recreation will be addressed through the RRCT.
9. Indicated program only represents an outline of the implementation plan and is not intended to cover everything that might be contained on the updated navigation charts.
10. Priority unchanged; remains Low.
15. No change to program. Program outlined is intended to be a positive approach as to what the Rock Island District can do. Priority unchanged; remains Medium.
16. Substitute phrase incorporated into final report.
17. Suggested change incorporated into final report.
25. Priority unchanged; remains Medium. Monitoring of disposal sites to document the impact on fish and wildlife resources will be contingent on availability of funds.
- 17-26. Mitigation program incorporated into final report.
27. Program changed to read "The Rock Island District supports the recommended wording and is currently providing the required information in agreement with Section 404(t), Clean Water Act of 1977."
31. Coordination comment.
32. Coordination comment.

NCRED-PB  
Mr. Tom A. Saunders

22 MAY 1981

33. Coordination comment.

34. Program changed to include "fragile wetlands, backwaters, and lowland habitats."

36-40. Detail; not necessary to incorporate into program.

37. The Rock Island District does not plan to make a commitment to model development. Program outlined is intended to be a positive approach as to what the Rock Island District can do.

39. Concerns are addressed in action item 40.

40. This program does cover proposed future actions associated with recurrent dredge sites identified by the Dredging Requirements Work Group.

41. Wording of recommendation and implementation program changed in the final report.

42. Added "Under certain hydraulic conditions, the Rock Island District may allow the channel to fall below 11 feet flat pool" to recommendation.

Unnumbered. (Recommendation 8) Recommendation and programs covering the Rock Island District participation on the On-site Inspection Team (OSIT) as a voting member and the revegetation of dredged material experiments incorporated into the final report.

47. Noted.

Unnumbered. (Recommendation 14) No change to program; the Rock Island District will assist in coordination through the RRCT.

49. The only action item specified for the Rock Island District in the GREAT II Main Report is at L/D #11.

50. The implementation cost for this program should have been \$30,000; final report changed accordingly.

54. No change to program. The Rock Island District does not acknowledge a cause and effect relationship between bank erosion and dredging. The Rock Island District has the authority to do streambank erosion protection only if it is associated with the 9-foot navigation project.

55. Priority changed from Medium to High. No change to program; coordination comment.

Unnumbered. (Recommendation 41) Coordination comment.

58. Priority unchanged; remains Medium.

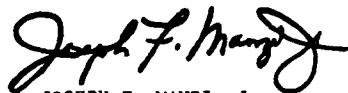
NCRED-PB  
Mr. Tom A. Saunders

22 MAY 1981

59. Coordination comment.
60. Suggested change incorporated into Rock Island District program.
62. Recommendation and program covering the initiation of a research and development program to determine the equipment necessary to perform large scale backwater alterations incorporated into final report.
63. Coordination comment.
64. Priority unchanged; remains Medium. Implementation cost is best Rock Island District estimate covering a "minimum" of 5-year study effort with a funding level of approximately \$200,000 each year.

Unnumbered. (Recommendations 55 and 56) The Rock Island District has endorsed these recommendations, but the District is not the appropriate level to seek implementation of these recommendations. Recommendations for policy changes of this type will be considered in the preparation of the North Central Division's submission to the Army Civil Works Legislative Program.

Sincerely,



JOSEPH F. MANZI, Jr.  
LTC, Corps of Engineers  
Acting District Engineer

Copy Furnished:  
Mr. Tom Groutage  
US Fish and Wildlife Service  
Spencer Building  
1830 Second Avenue  
Rock Island, Illinois 61201



DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61201

REPLY TO  
ATTENTION OF:

NCRED-PB

22 MAY 1981

Mr. William J. Bestmann, Director  
Iowa Development Commission  
250 Jewett Building  
Des Moines, Iowa 50309

Dear Mr. Bestmann:

Thank you for taking the time to review and comment on the Rock Island District's Draft Implementation Report for the GREAT II Study.

Insofar as your concern addressed in Section 3 and more specifically covered by Recommendation 55 on page 28 of the Draft Implementation Report, this recommendation calling for Congress to increase the US Army Corps of Engineers' authority to give "equal consideration to complete measures to benefit fish and wildlife and recreational resources" is a GREAT II, not a Corps of Engineers, recommendation. During the course of the GREAT II Study, the Rock Island District's voting member attempted to play a positive conciliatory role during the formulation of recommendations. The Rock Island District has endorsed this recommendation, but the District is not the appropriate level to seek implementation of this recommendation. Recommendations for policy changes of this type will be considered in the preparation of the North Central Division submission to the Army Civil Works Legislative Program.

The Final Implementation Report for the GREAT II Study is scheduled to be distributed in June 1981 along with the North Central Division Engineer's Public Notice. Due to the closeness of report finalization dates for the GREAT I and II Implementation Reports, the Public Notice will cover both GREAT I and GREAT II.

Sincerely,

  
JOSEPH F. MANZI, Jr.  
LTC, Corps of Engineers  
Acting District Engineer

Copy Furnished:  
Mr. Kevin Szcodronski  
Iowa Conservation Commission  
Wallace State Office Building  
Des Moines, Iowa 50310



DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61201

REPLY TO  
ATTENTION OF:

NCRED-PB

22 MAY 1981

Rear Admiral N. C. Venzke  
Commander  
Second Coast Guard District  
1430 Olive Street  
St. Louis, Missouri 63103

Dear Admiral Venzke:

Thank you for taking the time to review and comment on the Rock Island District's Draft Implementation Report for the GREAT II Study.

The \$700,000 per year cost for implementing the Channel Maintenance Plan is mainly associated with state requirements which are predominantly environmental concerns. Fiscal year 1983 is targeted as the initial year for these major funding increases. For the FY 1983 budget submission, a separate line item will be used for this \$700,000 budget request item.

The construction of a mooring cell just north of Lock 22 has been changed to Medium priority. The need for the mooring cell will be included in the studies to be accomplished in the program for Recommended Action No. 1 in the Draft Implementation Report.

The Final Implementation Report for the GREAT II Study is scheduled to be distributed in June 1981 along with the North Central Division Engineer's Public Notice. Due to the closeness of report finalization dates for the GREAT I and II Implementation Reports, the Public Notice will cover both GREAT I and GREAT II.

Sincerely,

JOSEPH F. MANZI, Jr.  
LTC, Corps of Engineers  
Acting District Engineer

Copy Furnished:  
Captain Richard Walton  
Second Coast Guard District  
1430 Olive Street  
St. Louis, Missouri 63103



DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61201

REPLY TO  
ATTENTION OF:  
NCRED-PB

22 MAY 1981

Mr. Larry J. Wilson, Director  
Iowa Conservation Commission  
Wallace State Office Building  
Des Moines, Iowa 50319

Dear Mr. Wilson:

I appreciate your review comments on the Draft Implementation Report for the GREAT II Study and intend to incorporate appropriate review comments from your agency to help strengthen our final report. The Final Implementation Report is scheduled to be distributed in June 1981 along with the North Central Division Engineer's Public Notice. Due to the closeness of report finalization dates for the GREAT I and II Implementation Reports, the Public Notice will cover both GREAT I and GREAT II.

The Draft Implementation Report sets priorities and gives an outline of the Rock Island District's implementation plans. The Rock Island District has recommended that the High prioritized programs, 36 of a total of 69 that the Rock Island District has lead agency responsibility for implementing, be approved and funded on an orderly basis to provide full implementation by 1986. It is my belief that this positive approach is a tremendous step forward in the implementation of GREAT II recommendations.

The Iowa Conservation Commission should have been more specific in their letter where they perceive changes in the meaning of adopted GREAT II recommendations. The intent of the Implementation Report was not to reproduce GREAT II products but rather to summarize GREAT II recommendations that the Corps, in particular the Rock Island District, was identified as having lead agency responsibility for implementation. With this in mind, the final document will be modified to reflect GREAT II wording where applicable.

Sincerely,

JOSEPH F. MANZI, Jr.  
LTC, Corps of Engineers  
Acting District Engineer

Copy Furnished:  
Mr. Kevin Szcodronski  
Iowa Conservation Commission  
Wallace State Office Building  
Des Moines, Iowa 50319

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IMPLEMENTATION REPORT FOR GREAT II STUDY, UPPER MISSISSIPPI RIV-ETC(U)  
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DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61201

REPLY TO  
ATTENTION OF:

NCRED-PB

22 MAY 1981

Mr. William W. Lindsay, Director  
Federal Energy Regulatory Commission  
Office of Electric Power Regulation  
ATTN: OEPRA-DHRA  
Washington, DC 20426

Dear Mr. Lindsay:

I appreciate your review of the Draft Implementation Report for the GREAT II Study and the furnishing of a table summarizing the Federal Energy Regulatory Commission's preliminary permit data for proposed hydropower projects utilizing existing Federal locks and dams along the GREAT II reach of the Mississippi River.

The Final Implementation Report for the GREAT II Study is scheduled to be distributed in June 1981 along with the North Central Division Engineer's Public Notice. Due to the closeness of report finalization dates for the GREAT I and II Implementation Reports, the Public Notice will cover both GREAT I and GREAT II.

Sincerely,

JOSEPH F. MANZI, Jr.  
LTC, Corps of Engineers  
Acting District Engineer

Copy Furnished:  
Mr. Lawrence F. Coffill  
Regional Engineer  
Federal Energy Regulatory Commission  
31st Floor, Federal Building  
230 South Dearborn Street  
Chicago, Illinois 60604